

Connecting via Winsock to Dialog

Logging in to Dialog

Trying 31060000009998...Open

DIALOG INFORMATION SERVICES  
PLEASE LOGON:

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ENTER PASSWORD:

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Welcome to DIALOG

Dialog level 05.21.01D

Last logoff: 17mar08 15:36:45

Logon file1 21mar08 08:13:25

\*\*\* ANNOUNCEMENTS \*\*\*

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\*\*\*The 2008 EMTREE Thesaurus has been added to EMBASE (Files 72, 73, 772, and 972)\*\*\*

RESUMED UPDATING

\*\*\*File 156, ToxFile

\*\*\*File 120, U.S. Copyrights

\*\*\*

RELOADS COMPLETED

\*\*\*Files 154 & 155, MEDLINE (annual reload)

\*\*\*Files 72 & 73, EMBASE

\*\*\*

FILES REMOVED

\*\*\*Files 359,959,804, Chemical Economics Handbook

\*\*\*Files 360,960, Specialty Chemicals Update Program

\*\*\*

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>>><http://www.dialog.com/whatsnew/>. You can find news about <<<

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\* \* \*

File 1:ERIC 1965-2008/Feb

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Set Items Description

--- -----

Cost is in DialUnits

? b 410

21mar08 08:13:25 User208760 Session D2929.1

\$0.55 0.154 DialUnits File1

\$0.55 Estimated cost File1  
 \$0.55 Estimated cost this search  
 \$0.55 Estimated total session cost 0.154 DialUnits

File 410:Dialog Comm.-of-Interest Newsletters 2007 /Jul  
 (c) 2008 Dialog

Set Items Description

```
? set hi ;set hi
HIGHLIGHT set on as ''
HIGHLIGHT set on as ''
? begin 5,73,155,399
    21mar08 08:13:49 User208760 Session D2929.2
    $0.00 0.117 DialUnits File410
    $0.00 Estimated cost File410
    $0.10 TELNET
    $0.10 Estimated cost this search
    $0.65 Estimated total session cost 0.271 DialUnits
```

SYSTEM:OS - DIALOG OneSearch

File 5:Biosis Previews(R) 1926-2008/Mar W3

(c) 2008 The Thomson Corporation

File 73:EMBASE 1974-2008/Mar 20

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 HELP NEWS 72 for details.

File 155:MEDLINE(R) 1950-2008/Mar 19

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\*File 155: MEDLINE has reloaded. Please see HELP NEWS 155  
 for details.

File 399:CA SEARCH(R) 1967-2007/UD=14812

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\*File 399: Use is subject to the terms of your user/customer agreement.  
 IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.

Set Items Description

? e au=frentsch marco ?

```
Ref Items Index-term
E1 3 AU=FRENTSCH M.
E2 10 AU=FRENTSCH MARCO
E3 0 *AU=FRENTSCH MARCO ?
E4 4 AU=FRENTSCH, MARCO
E5 1 AU=FRENTSEL, I.
E6 1 AU=FRENTSEL, KH.
E7 1 AU=FRENTSEL' G-Y
E8 3 AU=FRENTSEL' KH
E9 1 AU=FRENTSOS J A
E10 1 AU=FRENTSOS J.A.
E11 1 AU=FRENTTE S
E12 2 AU=FRENTZ B
```

Enter P or PAGE for more

```
? s el-e4
    3 AU=FRENTSCH M.
    10 AU=FRENTSCH MARCO
    0 AU=FRENTSCH MARCO ?
    4 AU=FRENTSCH, MARCO
S1 17 E1-E4
```

? e au=rothe martin ?

Ref	Items	Index-term
E1	1	AU=ROTHER MARTIL JILL
E2	4	AU=ROTHER MARTIN
E3	0	*AU=ROTHER MARTIN ?
E4	3	AU=ROTHER MATTHIAS
E5	3	AU=ROTHER MAURICE
E6	3	AU=ROTHER MEYER A
E7	8	AU=ROTHER MICHAEL
E8	48	AU=ROTHER MIKE
E9	5	AU=ROTHER N
E10	1	AU=ROTHER N VINGE
E11	1	AU=ROTHER N.
E12	1	AU=ROTHER NINA

Enter P or PAGE for more

? s e2

S2 4 AU='ROTHER MARTIN'

? e au=thiel andreas ?

Ref	Items	Index-term
E1	5	AU=THIEL ANDRA
E2	100	AU=THIEL ANDREAS
E3	0	*AU=THIEL ANDREAS ?
E4	5	AU=THIEL ANDREW J
E5	2	AU=THIEL ANGELA
E6	3	AU=THIEL ANJA
E7	3	AU=THIEL ANNETTE
E8	1	AU=THIEL ANSGAR
E9	65	AU=THIEL B
E10	10	AU=THIEL B A
E11	1	AU=THIEL B G
E12	1	AU=THIEL B J

Enter P or PAGE for more

? s e2

S3 100 AU='THIEL ANDREAS'

? s (s1 or s2 or s3) and (t(w)cell? or t(w)lymphocyt?)

>>>File 5 processing for CELL? stopped at CELLULLTLS

Processing

Processing

17	S1
4	S2
100	S3
2190769	T
13189759	CELL?
807024	T(W)CELL?
2190769	T
1419886	LYMPHOCYT?
539811	T(W)LYMPHOCYT?
S4	58 (S1 OR S2 OR S3) AND (T(W)CELL? OR T(W)LYMPHOCYT?)

? rd s4

S5 39 RD S4 (unique items)

? t s5/3/all

5/3/1 (Item 1 from file: 5)

DIALOG(R)File 5:BIOSIS Previews(R)

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0020056612 BIOSIS NO.: 200800103551

In vitro observations of T cell responsiveness to recall antigens during tumor necrosis factor-alpha blocking therapy in patients with ankylosing spondylitis

AUTHOR: Appel Heiner (Reprint); Scheer Rebecca; Haibel Hildrun; Wu Peihua; Spiller Inge; Brandt Henning; Song In-Ho; Rudwaleit Martin; Thiel Andreas; Sieper Jochen

AUTHOR ADDRESS: Charite Univ Med Berlin, Dept Gastroenterol Infectiol and Rheumatol, Campus Benjamin Franklin, Hindenburgdamm 30, D-12200 Berlin, Germany\*\*Germany

AUTHOR E-MAIL ADDRESS: heiner.appel@charite.de

JOURNAL: Journal of Rheumatology 34 (11): p2264-2270 NOV 2007 2007

ISSN: 0315-162X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

5/3/2 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0019901394 BIOSIS NO.: 200700561135

DNA demethylation in the human FOXP3 locus discriminates regulatory T cells from activated FOXP3(+) conventional T cells

AUTHOR: Baron Udo; Floess Stefan; Wieczorek Georg; Baumann Katrin; Gruetzkau Andreas; Dong Jun; Thiel Andreas; Boeld Tina J; Hoffmann Petra; Edinger Matthias; Tuerbachova Ivana; Hamann Alf; Olek Sven (Reprint); Huehn Jochen

AUTHOR ADDRESS: Epiontis GmbH, Rudower Chaussee 29, D-12489 Berlin, Germany\*\*Germany

AUTHOR E-MAIL ADDRESS: sven.olek@epiontis.com

JOURNAL: European Journal of Immunology 37 (9): p2378-2389 SEP 2007 2007

ITEM IDENTIFIER: doi:10.1002/eji.200737S94

ISSN: 0014-2980

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

5/3/3 (Item 3 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2008 The Thomson Corporation. All rts. reserv.

0019901393 BIOSIS NO.: 200700561134

Identification and isolation of murine antigen-reactive T cells according to CD154 expression

AUTHOR: Kirchhoff Dennis; Frentsch Marco; Leclerk Patrick; Bumann Dirk; Rausch Sebastian; Hartmann Susanne; Thiel Andreas; Scheffold Alexander (Reprint)

AUTHOR ADDRESS: Deutsches Rheuma Forschungszentrum Berlin, Immunomodulat Grp, Charitepl 1, D-10117 Berlin, Germany\*\*Germany

AUTHOR E-MAIL ADDRESS: scheffold@drfz.de

JOURNAL: European Journal of Immunology 37 (9): p2370-2377 SEP 2007 2007

ITEM IDENTIFIER: doi:10.1002/eji.200737322

ISSN: 0014-2980

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

5/3/4 (Item 4 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)  
(c) 2008 The Thomson Corporation. All rts. reserv.

0019865170 BIOSIS NO.: 200700524911

IL-10 is excluded from the functional cytokine memory of human CD4(+) memory T lymphocytes

AUTHOR: Dong Jun; Ivascu Claudia; Chang Hyun-Dong; Wu Peihua; Angeli Roberta; Maggi Laura; Eckhardt Florian; Tykocinski Lars; Haefliger Carolina; Moewes Beate; Sieper Jochen; Radbruch Andreas; Annunziato Francesco; Thiel Andreas (Reprint)

AUTHOR ADDRESS: Deutsch Forsch Zentrum Berlin, Clin Immunol Grp, Charite Pl 1, Berlin, Germany\*\*Germany

AUTHOR E-MAIL ADDRESS: dong@drfz.de; thiel@drfz.de

JOURNAL: Journal of Immunology 179 (4): p2389-2396 AUG 15 2007 2007

ISSN: 0022-1767

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

5/3/5 (Item 5 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)  
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0019856881 BIOSIS NO.: 200700516622

DNA methylation profiling of transcription factor genes in normal lymphocyte development and lymphomas

AUTHOR: Ivascu Claudia; Wasserkort Reinhold; Lesche Ralf; Dong Jun; Stein Harald; Thiel Andreas; Eckhardt Florian (Reprint)

AUTHOR ADDRESS: Epigenomics AG, Kleine Präsidentenstr 1, D-10178 Berlin, Germany\*\*Germany

AUTHOR E-MAIL ADDRESS: eckhardt@netscript.de

JOURNAL: International Journal of Biochemistry & Cell Biology 39 (7-8): p 1523-1538 2007 2007

ITEM IDENTIFIER: doi:10.1016/j.biocel.2007.02.006

ISSN: 1357-2725

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

5/3/6 (Item 6 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)  
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0019837772 BIOSIS NO.: 200700497513

Homologous high-throughput expression and purification of highly conserved E coli proteins

AUTHOR: Ergin Asgar; Buessow Konrad; Sieper Joachim; Thiel Andreas; Duchmann Rainer; Adam Thomas (Reprint)

AUTHOR ADDRESS: Univ Med Berlin, Charite, Campus Charite Mitte, Dorotheenstr 96, D-10117 Berlin, Germany\*\*Germany

AUTHOR E-MAIL ADDRESS: asgar.ergin@charite.de; buessow@molgen.mpg.de; joachim.sieper@charite.de; thiel@drfz.de; rainer.duchmann@charite.de; thomas.adam@charite.de

JOURNAL: Microbial Cell Factories 6 pArticle No.: 18 JUN 6 2007 2007

ITEM IDENTIFIER: doi:10.1186/1475-2859-6-18

ISSN: 1475-2859\_(print) 1475-2859\_(electronic)

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

5/3/7 (Item 7 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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0019605774 BIOSIS NO.: 200700265515  
Angiotensin AT2 receptors are expressed in CD8+ T cells and mediate IL-10 production following myocardial infarction  
AUTHOR: Li Jun (Reprint); Kaschina Elena; Dong Jun; Timm Melanie; Elkhrebash Kamal; Thiel Andreas; Unger Thomas  
AUTHOR ADDRESS: German Rheumatism Res Ctr, Clin Immunol, Berlin, Germany\*\* Germany  
AUTHOR E-MAIL ADDRESS: jun.li@charite.de  
JOURNAL: Journal of Hypertension 24 (Suppl. 6): p250 DEC 2006 2006  
CONFERENCE/MEETING: 21st Scientific Meeting of the International-Society-of-Hypertension/5th Asian-Pacific Congress of Hypertension/29th Annual Scientific Meeting of the Japanese-Society-of-Hypertension Fukuoka, JAPAN October 15 -19, 2006; 20061015  
SPONSOR: Int Soc Hypertens  
Japanese Soc Hypertens  
ISSN: 0263-6352  
DOCUMENT TYPE: Meeting; Meeting Poster  
RECORD TYPE: Citation  
LANGUAGE: English

5/3/8 (Item 8 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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0019599937 BIOSIS NO.: 200700259678  
Treatment of adenovirus infection by adoptive immunotherapy: Adenovirus capsid hexon is the main target protein of adenovirus-specific cellular immunity.  
AUTHOR: Arbach Olga (Reprint); Frentsch Marco; Chmielewicz Barbara; Kaiser Marco; Ellerbrock Heinz; Lauster Roland; Arnold Renate; Radbruch Andreas; Voigt Sebastian; Ebell Wolfram; Thiel Andreas  
AUTHOR ADDRESS: German Rheumatism Res Ctr, Berlin, Germany\*\*Germany  
JOURNAL: Blood 108 (11, Part 1): p829A-830A NOV 16 2006 2006  
CONFERENCE/MEETING: 48th Annual Meeting of the American-Society-of-Hematology Orlando, FL, USA December 09 -12, 2006; 20061209  
SPONSOR: Amer Soc Hematol  
ISSN: 0006-4971  
DOCUMENT TYPE: Meeting; Meeting Poster  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/9 (Item 9 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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0019459435 BIOSIS NO.: 200700119176  
Identification of immunodominant CD4+T cell epitopes in patients with Yersinia-induced reactive arthritis by cytometric cytokine secretion assay  
AUTHOR: Thiel Andreas; Wu Peihua; Lanowska Malgorzata; Dong Jun; Radbruch Andreas; Sieper Joachim (Reprint)

AUTHOR ADDRESS: Dept Med 1, Charite Campus Benjamin Franklin,Hindenburgdamm  
3, D-12200 Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: joachim.sieper@charite.de  
JOURNAL: Arthritis & Rheumatism 54 (11): p3583-3590 NOV 2006 2006  
ISSN: 0004-3591  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/10 (Item 10 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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0019449785 BIOSIS NO.: 200700109526  
Thymic rebound and recurrence of Foxp3(+) regulatory T cells  
after immunoablation and autologous stem cell transplantation in SLE.  
AUTHOR: Alexander Tobias (Reprint); Massenkeil Gero; Burmester Gerd;  
Radbruch Andreas; Hiepe Falk; Arnold Renate; Thiel Andreas  
AUTHOR ADDRESS: Univ Hosp Charite, Berlin, Germany\*\*Germany  
JOURNAL: Arthritis & Rheumatism 54 (9, Suppl. S): pS546 SEP 2006 2006  
CONFERENCE/MEETING: 70th Annual Scientific Meeting of the  
American-College-of-Rheumatology/41st Annual Scientific Meeting of the  
Association-of-Rheumatology-Health-Professionals Washington, DC, USA  
November 10 -15, 2006; 20061110  
SPONSOR: Amer Coll Rheumatol  
Assoc Rheumatol Hlth Profess  
ISSN: 0004-3591  
DOCUMENT TYPE: Meeting; Meeting Abstract  
RECORD TYPE: Citation  
LANGUAGE: English

5/3/11 (Item 11 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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19394874 BIOSIS NO.: 200700054615  
Angiotensin AT(2) receptors are expressed in CD8(+) T cells and  
mediate IL-10 production following myocardial infarction  
AUTHOR: Li Jun (Reprint); Kaschina Elena; Dong Jun; Timm Melanie; Elkhrebash  
Kama; Thiel Andreas; Unger Thomas  
AUTHOR ADDRESS: Univ Med Berlin, Charite, Inst Pharmacol and Toxicol,  
Cardiovasc Res Ctr, Berlin, Germany\*\*Germany  
JOURNAL: Acta Pharmacologica Sinica 27 (Suppl. 1): p139 JUL 2006 2006  
CONFERENCE/MEETING: 15th World Congress of Pharmacology Beijing, PEOPLES R  
CHINA July 02 -07, 2006; 20060702  
ISSN: 1671-4083  
DOCUMENT TYPE: Meeting; Meeting Poster  
RECORD TYPE: Citation  
LANGUAGE: English

5/3/12 (Item 12 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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18840007 BIOSIS NO.: 200600185402  
Adenovirus capsid hexon is the main target protein of adenovirus-specific  
CD4(+) T-cells: Fundamentals for targeting adenovirus by  
adoptive immunotherapy.

AUTHOR: Arbach Olga (Reprint); Frentsch Marco; Voigt Sebastian;  
Chmielewicz Barbara; Kaiser Marco; Ellerbrok Heins; Lauster Roland;  
Radrbruch Andreas; Scheffold Alexander; Ebell Wolfram; Thiel Andreas  
AUTHOR ADDRESS: German Rheumatism Res Ctr, Berlin, Germany\*\*Germany  
JOURNAL: Blood 106 (11, Part 1): p850A NOV 16 2005 2005  
CONFERENCE/MEETING: 47th Annual Meeting of the  
American-Society-of-Hematology Atlanta, GA, USA December 10 -13, 2005;  
20051210  
SPONSOR: Amer Soc Hematol  
ISSN: 0006-4971  
DOCUMENT TYPE: Meeting; Meeting Poster  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/13 (Item 13 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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18591064 BIOSIS NO.: 200510285564  
Direct access to CD4(+) T cells specific for defined antigens  
according to CD154 expression  
AUTHOR: Frentsch Marco; Arbach Olga; Kirchhoff Dennis; Moewes Beate;  
Worm Margitta; Rothe Martin; Scheffold Alexander; Thiel  
Andreas (Reprint)  
AUTHOR ADDRESS: Deutsch Rheuma Forschungszentrum, Clin Immunol Grp,  
Schumannstr 21-22, D-10117 Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: thiel@drfz.de  
JOURNAL: Nature Medicine 11 (10): p1118-1124 OCT 2005 2005  
ISSN: 1078-8956  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/14 (Item 14 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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18540681 BIOSIS NO.: 200510235181  
Post-thymic in vivo proliferation of naive CD4(+) T cells  
constrains the TCR repertoire in healthy human adults  
AUTHOR: Kohler Siegfried; Wagner Ulf; Pierer Matthias; Kimmig Sonja;  
Oppmann Birgit; Moewes Beate; Juelke Kerstin; Romagnani Chiara; Thiel  
Andreas (Reprint)  
AUTHOR ADDRESS: German Rheumatism Res Ctr, Schumannstr 21-22, D-10117  
Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: thiel@drfz.de  
JOURNAL: European Journal of Immunology 35 (6): p1987-1994 JUN 2005 2005  
ISSN: 0014-2980  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/15 (Item 15 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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18290666 BIOSIS NO.: 200500197731  
HLA-B27-restricted CD8+T cell response to cartilage-derived



self peptides in ankylosing spondylitis  
AUTHOR: Atagunduz Pamir; Appel Heiner; Kuon Wolfgang; Wu Peihua; Thiel  
Andreas; Kloetzel Peter-Michael; Sieper Joachim (Reprint)  
AUTHOR ADDRESS: Dept Med 1, Benjamin Franklin Univ Hosp, Hindenburgdamm 30,  
D-12200, Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: hjsieper@zedat.fu-berlin.de  
JOURNAL: Arthritis & Rheumatism 52 (3): p892-901 March 2005 2005  
MEDIUM: print  
ISSN: 0004-3591 \_(ISSN print)  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/16 (Item 16 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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18005972 BIOSIS NO.: 200400376761  
Antigen-reactive CD154 expression facilitates analysis and isolation of the  
entire repertoire of antigen-specific CD4+ T-cells  
AUTHOR: Frentsch Marco (Reprint); Rothe Martin; Radbruch  
Andreas; Thiel Andreas  
AUTHOR ADDRESS: German Rheumatism REs Ctr, Berlin, Germany\*\*Germany  
JOURNAL: Cytometry 59A (1): p71-72 May 2004 2004  
MEDIUM: print  
CONFERENCE/MEETING: XXII Congress of the International Society for  
Analytical Cytology  
SPONSOR: International Society for Analytical Cytology  
ISSN: 0196-4763 \_(ISSN print)  
DOCUMENT TYPE: Meeting; Meeting Abstract  
RECORD TYPE: Citation  
LANGUAGE: English

5/3/17 (Item 17 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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17939810 BIOSIS NO.: 200400310567  
Antigen-specific cytometry - New tools arrived!  
AUTHOR: Thiel Andreas (Reprint); Scheffold Alexander; Radbruch  
Andreas  
AUTHOR ADDRESS: German Rheumatism Res Ctr Berlin, Schumannstr 21-22,  
D-10117, Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: thiel@drfz.de  
JOURNAL: Clinical Immunology (Orlando) 111 (2): p155-161 May 2004 2004  
MEDIUM: print  
ISSN: 1521-6616 \_(ISSN print)  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/18 (Item 18 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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17825725 BIOSIS NO.: 200400193358  
Plasma cell-like morphology of Th1-cytokine-producing cells associated with  
the loss of CD3 expression.

AUTHOR: Page Guillaume; Sattler Arne; Kersten Sabine; Thiel Andreas;  
Radbruch Andreas; Miossec Pierre (Reprint)  
AUTHOR ADDRESS: Clinical Immunology Unit, Departments of Immunology and  
Rheumatology, Hopital Edouard Herriot, 69437, Lyon Cedex 03, France\*\*  
France  
AUTHOR E-MAIL ADDRESS: miossec@univ-lyon1.fr  
JOURNAL: American Journal of Pathology 164 (2): p409-417 February 2004  
2004  
MEDIUM: print  
ISSN: 0002-9440 \_(ISSN print)  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/19 (Item 19 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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17798597 BIOSIS NO.: 200400165938  
Substitution in position 3 of cyclosporin A abolishes the  
cyclophilin-mediated gain-of-function mechanism but not  
immunosuppression.  
AUTHOR: Baumgrass Ria; Zhang Yixin; Erdmann Frank; Thiel Andreas;  
Weiward Matthias; Radbruch Andreas; Fischer Gunter (Reprint)  
AUTHOR ADDRESS: Max Planck Research Unit for Enzymology of Protein Folding,  
Weinbergweg 22, D-06120, Halle/Saale, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: fischer@enzyme-halle.mpg.de  
JOURNAL: Journal of Biological Chemistry 279 (4): p2470-2479 January 23,  
2004 2004  
MEDIUM: print  
ISSN: 0021-9258  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/20 (Item 20 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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17794216 BIOSIS NO.: 200400161557  
Direct characterisation of adenovirus-specific T helper (Th)-cells in  
healthy adult donors.  
AUTHOR: Siegert Stefanie (Reprint); Rescher Ulrike; Chmielewicz Barbara;  
Frentsch Marco (Reprint); Ellerbrok Heinz; Radbruch Andreas  
(Reprint); Scheffold Alexander (Reprint); Thiel Andreas (Reprint)  
AUTHOR ADDRESS: Klinische Immunologie, Deutsches Rheuma-Forschungszentrum,  
Berlin, Germany\*\*Germany  
JOURNAL: Blood 102 (11): p53b November 16, 2003 2003  
MEDIUM: print  
CONFERENCE/MEETING: 45th Annual Meeting of the American Society of  
Hematology San Diego, CA, USA December 06-09, 2003; 20031206  
SPONSOR: American Society of Hematology  
ISSN: 0006-4971  
DOCUMENT TYPE: Meeting; Meeting Abstract  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/21 (Item 21 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)  
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17235196 BIOSIS NO.: 200300193915  
Simultaneous cytoelectric analysis of (auto)antigen-reactive T and B cell proliferation.  
AUTHOR: Schneider Sandra; Bruns Anne; Moewes Beate; Holzknicht Barbara; Hausdorf Gerd; Riemekasten Gabriela; Radbruch Andreas; Hiepe Falk; Thiel Andreas (Reprint)  
AUTHOR ADDRESS: Deutsches Rheumaforschungszentrum Berlin, Schumannstrasse 21/22, D-10117, Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: thiel@drfz.de  
JOURNAL: Immunobiology 206 (5): p484-495 December 2002 2002  
MEDIUM: print  
ISSN: 0171-2985  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/22 (Item 22 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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16770614 BIOSIS NO.: 200200364125  
Two subsets of naive T helper cells with distinct T cell receptor excision circle content in human adult peripheral blood  
AUTHOR: Kimmig Sonja; Przybylski Grzegorz K; Schmidt Christian A; Laurisch Katja; Moewes Beate; Radbruch Andreas; Thiel Andreas (Reprint)  
AUTHOR ADDRESS: Clinical Immunology, DRFZ Berlin, Schumannstr. 21/22, 10117, Berlin, Germany\*\*Germany  
JOURNAL: Journal of Experimental Medicine 195 (6): p789-794 March 18, 2002 2002  
MEDIUM: print  
ISSN: 0022-1007  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/23 (Item 23 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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16557968 BIOSIS NO.: 200200151479  
Two subsets of naive T helper cells in peripheral blood with distinct T-cell receptor excision circles content indicate peripheral homeostatic expansion of recent thymic emigrants in adult humans  
AUTHOR: Thiel Andreas (Reprint); Kimmig Sonja (Reprint); Przybylski Grzegorz K; Laurisch Katja; Radbruch Andreas (Reprint); Schmidt Christian A  
AUTHOR ADDRESS: Clinical Immunology, German Rheumatism Research Center, Berlin, Germany\*\*Germany  
JOURNAL: Blood 98 (11 Part 2): p40b November 16, 2001 2001  
MEDIUM: print  
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 2 Orlando, Florida, USA December 07-11, 2001; 20011207  
SPONSOR: American Society of Hematology  
ISSN: 0006-4971  
DOCUMENT TYPE: Meeting; Meeting Abstract  
RECORD TYPE: Abstract

LANGUAGE: English

5/3/24 (Item 24 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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16185518 BIOSIS NO.: 200100357357  
Analysis of the antigen-specific T cell response in reactive  
arthritis by flow cytometry  
AUTHOR: Thiel Andreas; Wu Peihua; Lauster Roland; Braun Juergen;  
Radbruch Andreas; Sieper Joachim (Reprint)  
AUTHOR ADDRESS: Rheumatology, Department of Medicine, Benjamin Franklin  
Hospital, Hindenburgdamm 30, Berlin, 12200, Germany\*\*Germany  
JOURNAL: Arthritis and Rheumatism 43 (12): p2834-2842 December, 2000 2000  
MEDIUM: print  
ISSN: 0004-3591  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/25 (Item 25 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2008 The Thomson Corporation. All rts. reserv.

15873323 BIOSIS NO.: 200100045162  
Treatment of spondyloarthropathies with antibodies against tumour necrosis  
factor alpha: First clinical and laboratory experiences  
AUTHOR: Braun Juergen (Reprint); Xiang Jian; Brandt Jan; Maetzel Hardy;  
Haibel Hildrun; Wu Peihua; Kohler Siegfried; Rudwaleit Martin; Siegert  
Stefanie; Radbruch Andreas; Thiel Andreas; Sieper Joachim  
AUTHOR ADDRESS: Department of Medicine, Rheumatology, German Rheumatology  
Research Centre, Benjamin Franklin Hospital, Free University Berlin,  
Berlin, Germany\*\*Germany  
JOURNAL: Annals of the Rheumatic Diseases 59 (Supplement 1): p185-189  
November, 2000 2000  
MEDIUM: print  
ISSN: 0003-4967  
DOCUMENT TYPE: Article; Literature Review  
RECORD TYPE: Citation  
LANGUAGE: English

5/3/26 (Item 26 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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15287291 BIOSIS NO.: 200000005604  
Low T cell production of TNFalpha in ankylosing spondylitis:  
Its relation to HLA-B27 and influence of the TNF-308 promoter gene  
polymorphism  
AUTHOR: Rudwaleit Martin (Reprint); Siegert S (Reprint); Yin Z (Reprint);  
Eick Jan (Reprint); Thiel Andreas (Reprint); Radbruch Andreas  
(Reprint); Sieper Jochen (Reprint); Braun Juergen (Reprint)  
AUTHOR ADDRESS: Berlin, Germany\*\*Germany  
JOURNAL: Arthritis and Rheumatism 42 (9 SUPPL.): pS401 Sept., 1999 1999  
MEDIUM: print  
CONFERENCE/MEETING: 63rd Annual Scientific Meeting of the American College  
of Rheumatology and the 34th Annual Scientific Meeting of the Association  
of Rheumatology Health Professionals Boston, Massachusetts, USA November

13-17, 1999; 19991113  
ISSN: 0004-3591  
DOCUMENT TYPE: Meeting; Meeting Abstract  
RECORD TYPE: Citation  
LANGUAGE: English

5/3/27 (Item 27 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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15285083 BIOSIS NO.: 200000003396  
Characterization of the antigen-specific-T cell response in  
reactive arthritis (REA) by provocation of cytokine expression  
AUTHOR: Wu Peihua (Reprint); Thiel Andreas (Reprint); Radbruch  
Andreas (Reprint); Braun Juergen (Reprint); Sieper Joachim (Reprint)  
AUTHOR ADDRESS: Berlin, Germany\*\*Germany  
JOURNAL: Arthritis and Rheumatism 42 (9 SUPPL.): pS379 Sept., 1999 1999  
MEDIUM: print  
CONFERENCE/MEETING: 63rd Annual Scientific Meeting of the American College  
of Rheumatology and the 34th Annual Scientific Meeting of the Association  
of Rheumatology Health Professionals Boston, Massachusetts, USA November  
13-17, 1999; 19991113  
ISSN: 0004-3591  
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster  
RECORD TYPE: Citation  
LANGUAGE: English

5/3/28 (Item 28 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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15282690 BIOSIS NO.: 200000001003  
Decreased TNFalpha production of CD8+ T cell subsets in HLA  
B27-positive patients with ankylosing spondylitis (AS)  
AUTHOR: Kohler Siegfried (Reprint); Hering Annette (Reprint); Thiel  
Andreas (Reprint); Radbruch Andreas (Reprint); Sieper Joachim  
(Reprint); Braun Juergen (Reprint)  
AUTHOR ADDRESS: Berlin, Germany\*\*Germany  
JOURNAL: Arthritis and Rheumatism 42 (9 SUPPL.): pS375 Sept., 1999 1999  
MEDIUM: print  
CONFERENCE/MEETING: 63rd Annual Scientific Meeting of the American College  
of Rheumatology and the 34th Annual Scientific Meeting of the Association  
of Rheumatology Health Professionals Boston, Massachusetts, USA November  
13-17, 1999; 19991113  
ISSN: 0004-3591  
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster  
RECORD TYPE: Citation  
LANGUAGE: English

5/3/29 (Item 29 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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15268837 BIOSIS NO.: 199900528497  
Th1/Th2 cytokines inside the CD45RO+ T cell subpopulation is  
not fixed but can be manipulated by IL-4 rheumatoid arthritis (RA)  
AUTHOR: Nolting Mirjam (Reprint); Thiel Andreas (Reprint); Braun  
Juergen (Reprint); Radbruch Andreas (Reprint); Sieper Joachim (Reprint)

AUTHOR ADDRESS: Berlin, Germany\*\*Germany  
JOURNAL: Arthritis and Rheumatism 42 (9 SUPPL.): pS196 Sept., 1999 1999  
MEDIUM: print  
CONFERENCE/MEETING: 63rd Annual Scientific Meeting of the American College  
of Rheumatology and the 34th Annual Scientific Meeting of the Association  
of Rheumatology Health Professionals Boston, Massachusetts, USA November  
13-17, 1999; 19991113  
ISSN: 0004-3591  
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster  
RECORD TYPE: Citation  
LANGUAGE: English

5/3/30 (Item 30 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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12591267 BIOSIS NO.: 199598059100  
High-gradient magnetic cell sorting  
BOOK TITLE: Methods in Cell Biology; Flow cytometry, Part B, Second edition  
AUTHOR: Radbruch Andreas (Reprint); Mechtold Birgit (Reprint); Thiel  
Andreas (Reprint); Miltenyi Stefan; Pflueger Eckhard  
BOOK AUTHOR/EDITOR: Darzynkiewicz Z (Editor); Robinson J P (Editor);  
Crissman H A (Editor)  
AUTHOR ADDRESS: Inst. Genetik, Univ. Koeln, 50931 Koeln, Germany\*\*Germany  
SERIES TITLE: Methods in Cell Biology 42 p387-403 1994  
BOOK PUBLISHER: Academic Press, Inc., 1250 Sixth Ave., San Diego,  
California 92101, USA  
Academic Press Ltd., 14 Belgrave Square, 24-28 Oval Road,  
London NW1 70X, England, UK  
ISSN: 0091-679X ISBN: 0-12-564143-5 (cloth); 0-12-203052-4 (paper)  
DOCUMENT TYPE: Book; Book Chapter  
RECORD TYPE: Citation  
LANGUAGE: English

5/3/31 (Item 31 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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12217869 BIOSIS NO.: 199497239154  
Induction of interleukin 4 (IL-4) expression in T helper (Th) cells is not  
dependent on IL-4 from non-Th cells  
AUTHOR: Schmitz Jurgen; Thiel Andreas; Kuhn Ralf; Rajewsky Klaus;  
Mueller Werner; Assenmacher Mario; Radbruch Andreas (Reprint)  
AUTHOR ADDRESS: Inst. Genetics, Univ. Cologne, Weyertal 121, D-50931 Koln,  
Germany\*\*Germany  
JOURNAL: Journal of Experimental Medicine 179 (4): p1349-1353 1994 1994  
ISSN: 0022-1007  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

5/3/32 (Item 1 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
(c) format only 2008 Dialog. All rts. reserv.

26160430 PMID: 18292651  
Direct assessment of thymic reactivation after autologous stem cell  
transplantation.

Thiel Andreas; Alexander Tobias; Schmidt Christian A; Przybylski  
Gregorsz K; Kimmig Sonja; Kohler Siegfried; Radtke Hartmut; Gromnica-Ihle  
Erika; Massenkeil Gero; Radbruch Andreas; Arnold Renate; Hiepe Falk  
Clinical Immunology Group, Deutsches Rheuma-Forschungszentrum Berlin,  
Berlin, Germany. thiel@drfz.de  
Acta haematologica (Switzerland) 2008, 119 (1) p22-7, ISSN  
1421-9662--Electronic Journal Code: 0141053  
Publishing Model Print-Electronic  
Document type: Journal Article; Research Support, Non-U.S. Gov't  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: In Process

5/3/33 (Item 2 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
(c) format only 2008 Dialog. All rts. reserv.

17355963 PMID: 16873676  
Multidirectional interactions are bridging human NK cells with  
plasmacytoid and monocyte-derived dendritic cells during innate immune  
responses.  
Della Chiesa Mariella; Romagnani Chiara; Thiel Andreas; Moretta  
Lorenzo; Moretta Alessandro  
Dipartimento di Medicina Sperimentale, Sezione di Istologia, Via G.B.  
Marsano 10, 16132 Genova, Italy.  
Blood (United States) Dec 1 2006, 108 (12) p3851-8, ISSN 0006-4971  
--Print Journal Code: 7603509  
Publishing Model Print-Electronic  
Document type: Clinical Trial; Journal Article; Research Support,  
Non-U.S. Gov't  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: MEDLINE; Completed

5/3/34 (Item 3 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
(c) format only 2008 Dialog. All rts. reserv.

16538626 PMID: 15997468  
Activation of human NK cells by plasmacytoid dendritic cells and its  
modulation by CD4+ T helper cells and CD4+ CD25hi T regulatory cells.  
Romagnani Chiara; Della Chiesa Mariella; Kohler Siegfried; Moewes Beate;  
Radbruch Andreas; Moretta Lorenzo; Moretta Alessandro; Thiel Andreas  
German Rheumatism Research Centre, Clinical Immunology, Berlin, Germany.  
romagnani@drfz.de  
European journal of immunology (Germany) Aug 2005, 35 (8) p2452-8,  
ISSN 0014-2980--Print Journal Code: 1273201  
Publishing Model Print  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: MEDLINE; Completed

5/3/35 (Item 4 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
(c) format only 2008 Dialog. All rts. reserv.

16427762 PMID: 15943637

CD31+ naive Th cells are stable during six months following kidney transplantation: implications for post-transplant thymic function.

Nickel Peter; Kreutzer Stephanie; Bold Gantuja; Friebe Astrid; Schmolke Kathrin; Meisel Christian; Jurgensen Jan Steffen; Thiel Andreas; Wernecke Klaus-Dieter; Reinke Petra; Volk Hans-Dieter

Department of Nephrology and Intensive Care, Campus Virchow, Charite-University Medicine Berlin, Germany. peter.nickel@charite.de

American journal of transplantation - official journal of the American Society of Transplantation and the American Society of Transplant Surgeons (Denmark) Jul 2005, 5 (7) p1764-71, ISSN 1600-6135--Print

Journal Code: 100968638

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

5/3/36 (Item 5 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2008 Dialog. All rts. reserv.

16058163 PMID: 15535830

Use of HLA-B27 tetramers to identify low-frequency antigen-specific \*\*\*cells\*\*\* in Chlamydia-triggered reactive arthritis.

Appel Heiner; Kuon Wolfgang; Kuhne Maren; Wu Peihua; Kuhlmann Stefanie; Kollnberger Simon; Thiel Andreas; Bowness Paul; Sieper Joachim

Charite Berlin, Campus Benjamin Franklin, Department for Gastroenterology, Infectiology and Rheumatology, Berlin, Germany. heinerappel@yahoo.com

Arthritis research & therapy (England) 2004, 6 (6) pR521-34, ISSN

1478-6362--Electronic Journal Code: 101154438

Publishing Model Print-Electronic

Document type: Journal Article; Research Support, Non-U.S. Gov't

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

5/3/37 (Item 6 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2008 Dialog. All rts. reserv.

15909783 PMID: 15302345

Stem cell transplantation for autoimmune disorders. Immune reconstitution.

Isaacs John D; Thiel Andreas

School of Clinical Medical Sciences, University of Newcastle upon Tyne, UK. j.d.isaacs@ncl.ac.uk

Best practice & research. Clinical haematology (England) Jun 2004, 17

(2) p345-58, ISSN 1521-6926--Print Journal Code: 101120659

Publishing Model Print

Document type: Journal Article; Review

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

5/3/38 (Item 7 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2008 Dialog. All rts. reserv.



15089714 PMID: 12632433

Down-regulation of the nonspecific and antigen-specific T cell cytokine response in ankylosing spondylitis during treatment with infliximab.

Zou Jianxiang; Rudwaleit Martin; Brandt Jan; Thiel Andreas; Braun Jürgen; Sieper Joachim  
Benjamin Franklin Klinikum, Deutsches Rheumaforschungszentrum, Berlin, Germany.

Arthritis and rheumatism (United States) Mar 2003, 48 (3) p780-90,  
ISSN 0004-3591--Print Journal Code: 0370605  
Publishing Model Print; Comment in Arthritis Rheum. 2004  
Mar;50(3) 1015-6; author reply 1017; Comment in PMID 15022354

Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: MEDLINE; Completed

5/3/39 (Item 1 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
(c) 2008 American Chemical Society. All rts. reserv.

140286138 CA: 140(18)286138g PATENT  
Method for detecting and isolating antigen specific T lymphocytes  
INVENTOR(AUTHOR): Frentsch, Marco; Rothe, Martin; Thiel, Andreas  
LOCATION: Germany,  
ASSIGNEE: Deutsches Rheuma-Forschungs Zentrum Berlin  
PATENT: PCT International; WO 200427428 A1 DATE: 20040401  
APPLICATION: WO 2003EP9354 (20030822) \*EP 200290300 (20020823)  
PAGES: 42 pp. CODEN: PIXXD2 LANGUAGE: German  
PATENT CLASSIFICATIONS:  
CLASS: G01N-033/569A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;  
CA; CH; CN; CO; CR; CU; CZ; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM;  
HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV;  
MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC;  
SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU;  
ZA; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ DESIGNATED REGIONAL: GH; GM; KE  
; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW; AT; BE; BG; CH; CY; CZ; DE; DK;  
EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF;  
BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG  
? t s5/7/1,3,13,17,21,24

5/7/1 (Item 1 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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0020056612 BIOSIS NO.: 200800103551  
In vitro observations of T cell responsiveness to recall  
antigens during tumor necrosis factor-alpha blocking therapy in patients  
with ankylosing spondylitis  
AUTHOR: Appel Heiner (Reprint); Scheer Rebecca; Haibel Hildrun; Wu Peihua;  
Spiller Inge; Brandt Henning; Song In-Ho; Rudwaleit Martin; Thiel  
Andreas; Sieper Jochen  
AUTHOR ADDRESS: Charite Univ Med Berlin, Dept Gastroenterol Infectiol and  
Rheumatol, Campus Benjamin Franklin,Hindenburgdamm 30, D-12200 Berlin,  
Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: heiner.appel@charite.de  
JOURNAL: Journal of Rheumatology 34 (11): p2264-2270 NOV 2007 2007  
ISSN: 0315-162X

DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

**ABSTRACT:** Objective. Anti-tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ) therapy can induce reactivation of tuberculosis and an increase of other infections in patients with ankylosing spondylitis (AS). This raises the question if an alteration of T cell function can be detected by in vitro analysis to identify patients who might be more at risk of acquiring such infectious diseases. Methods. We examined peripheral blood from AS patients without history of tuberculosis before and after 10-14 and 24-36 weeks of therapy with adalimumab (n = 8) or infliximab (n = 10). Fresh peripheral blood mononuclear cells were stimulated with cytomegalovirus antigens and with the Mycobacterium tuberculosis antigen purified protein derivative and early secretory antigen target 6. Interferon- $\gamma$  production of CD4+ T cells was assessed after in vitro antigen-specific stimulation by intracellular cytokine staining and flow cytometry. Results. There was no significant change, either decrease or increase, of the T cell response to recall antigens during therapy compared to controls without treatment, if the mean values of all patients treated with adalimumab or infliximab were compared at the given timepoints. However, analysis on the individual patient level of such T cell responses revealed 1 adalimumab-treated patient and 2 infliximab-treated patients with a clear decrease of \*\*\*T\*\*\* \*\*cell\*\*\* response during therapy. Longterm analysis indicated that such a decrease of T cell responsiveness is generally transient and reconstituted at the latest after 52 weeks. Conclusion. Some patients treated with adalimumab or infliximab showed a decrease of T cell responsiveness, which seems to be transient. These patients in particular might be at risk for intracellular infections.

5/7/3 (Item 3 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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0019901393 BIOSIS NO.: 200700561134  
Identification and isolation of murine antigen-reactive T cells according to CD154 expression  
AUTHOR: Kirchhoff Dennis; Frentsch Marco; Leclerk Patrick; Bumann Dirk; Rausch Sebastian; Hartmann Susanne; Thiel Andreas; Scheffold Alexander (Reprint)  
AUTHOR ADDRESS: Deutsches Rheuma Forschungszentrum Berlin, Immunomodulat Grp, Charitepl 1, D-10117 Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: scheffold@drfz.de  
JOURNAL: European Journal of Immunology 37 (9): p2370-2377 SEP 2007 2007  
ITEM IDENTIFIER: doi:10.1002/eji.200737322  
ISSN: 0014-2980  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

**ABSTRACT:** T helper (Th) cells are central regulators of adaptive immune responses. However, the detection of the small number of Th cells specific for a particular antigen or pathogen is still a major challenge. CD154 was recently introduced as a marker for antigen-specific Th cells. To date, this technology was not applicable for mice - arguably the most important immunological model system. CD154 is difficult to detect due to its rapid removal from the cell surface upon binding to CD40 during antigen-specific activation by APC. We present an efficient strategy to

block the degradation of murine CD154 by combined use of antibodies against CD40 and CD154. This strategy makes CD154 easily accessible for surface staining, which allows isolation and expansion of rare antigen specific Tcells. Importantly, CD154 identified all specific Tcells in strongly Th1- or Th2-polarized immune responses against pathogens like Salmonella typhimurium and Heligmosomoides polygyrus, independent of their potential to produce cytokines. We demonstrate that CD154 can in fact be used as a reliable marker for antigen-specific CD4 T cells in mice, offering a unique option to analyze, isolate and rapidly expand the entire pool of Th-cells generated during a physiological \*\*\*T\*\*\* \*\*\*cell\*\*\* response in vivo.

5/7/13 (Item 13 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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18591064 BIOSIS NO.: 200510285564  
Direct access to CD4(+) T cells specific for defined antigens according to CD154 expression  
AUTHOR: Frentsch Marco; Arbach Olga; Kirchhoff Dennis; Moewes Beate; Worm Margitta; Rothe Martin; Scheffold Alexander; Thiel Andreas (Reprint)  
AUTHOR ADDRESS: Deutsch Rheuma Forschungszentrum, Clin Immunol Grp, Schumannstr 21-22, D-10117 Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: thiel@drfz.de  
JOURNAL: Nature Medicine 11 (10): p1118-1124 OCT 2005 2005  
ISSN: 1078-8956  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: The direct assessment of T helper (T-H)-cell responses specific for antigens is essential to evaluate pathogenic and protective immunity. Presently, analysis and isolation of antigen-specific T-H cells is restricted to cells that produce cytokines, or can be performed only with a rare selection of specific peptide major histocompatibility complex class II (MHC II) multimers. Here we report a new method that enables the assessment and isolation of T-H cells specific for a defined antigen according to CD154 expression induced after stimulation in vitro. We show that antigen-induced CD154 expression is highly sensitive and specific for human and mouse antigen-specific T-H cells. Moreover, the isolation of antigen-specific CD154(+) T-H cells necessitates only surface staining with antibodies, thereby enabling the fast generation of antigen-specific T-H cell lines. Our approach allows assessment of T-H cells with a defined specificity for the combined quantitative and qualitative analysis of T-H-cell immunity as well as for the isolation of specific T-H cells for targeted cellular immunotherapies.

5/7/17 (Item 17 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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17939810 BIOSIS NO.: 200400310567  
Antigen-specific cytometry - New tools arrived!  
AUTHOR: Thiel Andreas (Reprint); Scheffold Alexander; Radbruch Andreas  
AUTHOR ADDRESS: German Rheumatism Res Ctr Berlin, Schumannstr 21-22, D-10117, Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: thiel@drfz.de

JOURNAL: Clinical Immunology (Orlando) 111 (2): p155-161 May 2004 2004  
MEDIUM: print  
ISSN: 1521-6616 \_(ISSN print)  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: Until recently, immunofluorescence-based cytometry and cell sorting, which have now found their place in the repertoire of state-of-the-art technologies, have mostly served to identify and assess subsets of leukocytes and thereby to evaluate rather systemic changes of the immune system. A more detailed defined evaluation of immune responses was not possible for a long time. In particular, a focus of the cytometric analysis on those lymphocytes specifically recognizing a defined antigen was hampered due to technical limitations. Yet, traditional methods for the analysis of antigen-specific lymphocytes typically relied upon measurements of proliferation or cytokine expression in bulk cultures. In recent times, this hindrance has been overcome both for B and \*\*\*T\*\*\* \*\*lymphocytes\*\*\*. We review here the emerging field of antigen-specific cytometry and describe the most widely used state of the art and future technologies that offer exciting new options to analyze and isolate specifically those lymphocytes that are directly involved in the immune reaction to given antigens, options that have already spurred research, diagnosis, and therapy beyond scope.  
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5/7/21 (Item 21 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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17235196 BIOSIS NO.: 200300193915  
Simultaneous cytometric analysis of (auto)antigen-reactive T and B cell proliferation.  
AUTHOR: Schneider Sandra; Bruns Anne; Moewes Beate; Holzknecht Barbara; Hausdorf Gerd; Riemekasten Gabriela; Radbruch Andreas; Hiepe Falk; Thiel Andreas (Reprint)  
AUTHOR ADDRESS: Deutsches Rheumaforschungszentrum Berlin, Schumannstrasse 21/22, D-10117, Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: thiel@drfz.de  
JOURNAL: Immunobiology 206 (5): p484-495 December 2002 2002  
MEDIUM: print  
ISSN: 0171-2985  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: The detection and characterization of (auto)antigen-specific lymphocytes, both B and T cells, is essential to investigate immunopathologic mechanisms. Our aim was to perform a CFSE (Carboxyfluorescein diacetate succinimidyl ester)-based cytometric analysis of peripheral blood mononuclear cells (PBMC) proliferating in response to antigenic provocation. CFSE-labeled PBMC were stimulated with a superantigen (SEB), a recall antigen (tetanus toxoid), an allergen (grass pollen) and an autoantigen (nucleosomes) and stained after cultivation with CD4-, CD8- and CD19-antibodies. Proliferated cells were identified cytometrically by the decrease of the CFSE fluorescence intensity due to cell division. Antigen-reactive, proliferated B cells were further analysed phenotypically, antigen-specific proliferated T cells were further characterized functionally regarding their cytokine secretion pattern after polyclonal restimulation. Using this technique,

antigen-specific proliferated B and Th cells were detected even at low frequencies. Analyzing the cytokine secretion pattern of allergen-reactive proliferated Th cells after polyclonal restimulation we found differences in the expression of IL-13 and IL-4 between an atopic and a healthy donor. After stimulation of PBMC from TT-vaccinated donors TT-specific proliferated B cells were detected in high frequencies and showed a plasmablast-typical CD20low CD27high phenotype with only low frequencies expressing CD138 (= Syndecan-1). Proliferation of nucleosome-reactive Th cells and B cells was observed in both patients and healthy controls. We have optimized here the cytometric analysis of reactive cell proliferation based on CFSE offering various facilities of application on the further characterization of both antigen-specific B and \*\*\*T\*\*\* \*\*cells\*\*\* .

5/7/24 (Item 24 from file: 5)  
 DIALOG(R)File 5:Biosis Previews(R)  
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16185518 BIOSIS NO.: 200100357357  
 Analysis of the antigen-specific T cell response in reactive arthritis by flow cytometry  
 AUTHOR: Thiel Andreas; Wu Peihua; Lauster Roland; Braun Juergen; Radbruch Andreas; Sieper Joachim (Reprint)  
 AUTHOR ADDRESS: Rheumatology, Department of Medicine, Benjamin Franklin Hospital, Hindenburgdamm 30, Berlin, 12200, Germany\*\*Germany  
 JOURNAL: Arthritis and Rheumatism 43 (12): p2834-2842 December, 2000 2000  
 MEDIUM: print  
 ISSN: 0004-3591  
 DOCUMENT TYPE: Article  
 RECORD TYPE: Abstract  
 LANGUAGE: English

ABSTRACT: Objective. In reactive arthritis (ReA) a bacteria-specific T cell response to the triggering microbe is detected in synovial fluid (SF), and an impaired Th1 cytokine response has been described. The recent identification of immunodominant bacterial proteins/peptides and new technologies make a more detailed analysis of the immune response possible. The aim of the present study was to use these new techniques to determine the antigen-specific T cell frequency and the cytokine secretion pattern on stimulation with bacteria-derived recombinant proteins in the peripheral blood (PB) and SF from patients with ReA. Methods. In 3 patients with Chlamydia-induced ReA and 2 patients with Yersinia-induced ReA, the SF T cell response was investigated after stimulation with the Chlamydia-derived proteins major outer membrane protein (MOMP) and heat-shock protein 60 (Hsp60) and the Yersinia-derived proteins 19-kd protein and Hsp60. In 3 of these patients, the PB T cell response was investigated in parallel. \*\*\*T\*\*\* \*\*cells\*\*\* were stimulated in whole blood or whole SF with antigen plus anti-CD28 for 6 hours, brefeldin A was added after 2 hours, and cells were fixed and stained with antibodies against the surface markers CD4 and CD69 and against the cytokines interferon-gamma (IFNgamma), tumor necrosis factor alpha, interleukin-10 (IL-10), and IL-4. Positive cells were quantified by flow cytometry. Results. In the 3 patients with Chlamydia-induced ReA, the antigen-specific T cell frequency (percentage of IFNgamma CD69 double-positive CD4+ \*\*\*T\*\*\* \*\*cells\*\*\* ) in response to MOMP (mean +/- SD 1.2 +/- 1.38%) and to Hsp60 (1.21 +/- 1.45%) in SF was about the same. In the 2 patients with Yersinia-induced ReA, the mean +/- SD frequency was 0.66 +/- 0.36% in response to the Hsp60 and 0.3% +/- 0.22 in response to the 19-kd protein. In the 3 patients whose PB was evaluated, the corresponding T

\*\*\*cell\*\*\* response was gtoreql0 times lower. In 2 patients with Chlamydia-induced ReA, antigen-specific IL-10-positive CD4+ T  
 \*\*\*cells\*\*\* were detected in 0.10-0.23% of the CD4+ \*\*\*T\*\*\* \*\*\*cell\*\*\*  
 subpopulation. Conclusion. The frequency of antigen-specific \*\*\*T\*\*\*  
 cells to Chlamydia- and Yersinia-derived antigens in the SF of ReA  
 patients is between 1:200 and 1:50. Both the chlamydial Hsp60 and MOMP  
 are dominant \*\*\*T\*\*\* \*\*\*cell\*\*\* antigens in Chlamydia-induced ReA. In  
 patients with Chlamydia-induced ReA, we detected antigen-specific IL-10  
 secretion, which might mediate an inhibition of effective bacterial  
 clearance.

? s (t(w)cell? or t(W)lymphocyt?) (20n) (detect? or diagnos?) (20n) (cd154 or cd40L or  
 cd40(w)ligand) (20n) (antigen(W)specific?)

>>>File 5 processing for CELL? stopped at CELLULLTLS

Processing

Processing

Processing

Processing

2190769	T
13189759	CELL?
807024	T(W)CELL?
2190769	T
1419886	LYMPHOCYT?
539811	T(W)LYMPHOCYT?
3679856	DETECT?
6432896	DIAGNOS?
3704	CD154
8335	CD40L
33865	CD40
532819	LIGAND
15952	CD40(W)LIGAND
1510215	ANTIGEN
5033784	SPECIFIC?
S6	23 (T(W)CELL? OR T(W)LYMPHOCYT?) (20N) (DETECT? OR DIAGNOS?) (20N) (CD154 OR CD40L OR CD40(W)LIGAND) (20N) (ANTIGEN(W)SPECIFIC?)

? rd s6

S7 11 RD S6 (unique items)

? t s7/3/all

7/3/1 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0020089819 BIOSIS NO.: 200800136758

Intracellular CD154 expression reflects antigen-specific CD8(+) T cells but  
 shows less sensitivity than intracellular cytokine and MHC tetramer  
 staining

AUTHOR: Han Young Woo; Aleyas Abi G; George Junu A; Yoon Hyun A; Lee John  
 Hwa; Kim Byung Sam; Eo Seong Kug (Reprint)

AUTHOR ADDRESS: Chonbuk Natl Univ, Coll Vet Med, Dept Microbiol, Jeonju  
 561756, South Korea\*\*South Korea

AUTHOR E-MAIL ADDRESS: vetvirus@chonbuk.ac.kr

JOURNAL: Journal of Microbiology and Biotechnology 17 (12): p1955-1964 DEC  
 2007 2007

ISSN: 1017-7825\_(print) 1738-8872\_(electronic)

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

7/3/2 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)  
(c) 2008 The Thomson Corporation. All rts. reserv.

0019901393 BIOSIS NO.: 200700561134  
Identification and isolation of murine antigen-reactive T cells according  
to CD154 expression  
AUTHOR: Kirchhoff Dennis; Frentsch Marco; Leclerk Patrick; Bumann Dirk;  
Rausch Sebastian; Hartmann Susanne; Thiel Andreas; Scheffold Alexander  
(Reprint)  
AUTHOR ADDRESS: Deutsches Rheuma Forschungszentrum Berlin, Immunomodulat  
Grp, Charitepl 1, D-10117 Berlin, Germany\*\*Germany  
AUTHOR E-MAIL ADDRESS: scheffold@drfz.de  
JOURNAL: European Journal of Immunology 37 (9): p2370-2377 SEP 2007 2007  
ITEM IDENTIFIER: doi:10.1002/eji.200737322  
ISSN: 0014-2980  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

7/3/3 (Item 3 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2008 The Thomson Corporation. All rts. reserv.

0019607433 BIOSIS NO.: 200700267174  
B cells play a cooperative role via CD40L-CD40 interaction in T  
cell-mediated experimental autoimmune neuritis in Lewis rats  
AUTHOR: Zhu Wei; Mix Eilhard; Jin Tao; Adem Abdu; Zhu Jie (Reprint)  
AUTHOR ADDRESS: Karolinska Univ Hosp Huddinge, Dept Neurobiol, Div  
Neurodegenerat and Neuroinflamm, Karolinska Inst, Novum, Plan 5, S-14186  
Huddinge, Sweden\*\*Sweden  
AUTHOR E-MAIL ADDRESS: Jie.Zhu@ki.se  
JOURNAL: Neurobiology of Disease 25 (3): p642-648 MAR 2007 2007  
ISSN: 0969-9961  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

7/3/4 (Item 4 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2008 The Thomson Corporation. All rts. reserv.

0019600723 BIOSIS NO.: 200700260464  
Primary antigen-specific B cells: A novel approach to cellular-based  
immunotherapy.  
AUTHOR: Ahmadi Tahanitan (Reprint); Weizmann Nathalie; Efebera Yvonne A;  
Sherr David H  
AUTHOR ADDRESS: Boston Univ, Sch Publ Hlth, Boston, MA USA\*\*USA  
JOURNAL: Blood 108 (11, Part 1): p1061A-1062A NOV 16 2006 2006  
CONFERENCE/MEETING: 48th Annual Meeting of the  
American-Society-of-Hematology Orlando, FL, USA December 09 -12, 2006;  
20061209  
SPONSOR: Amer Soc Hematol  
ISSN: 0006-4971  
DOCUMENT TYPE: Meeting; Meeting Poster  
RECORD TYPE: Abstract  
LANGUAGE: English

7/3/5 (Item 5 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)  
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18318845 BIOSIS NO.: 200510013345  
Nonreplicating recombinant vaccinia virus expressing CD40 ligand enhances  
APC capacity to stimulate specific CD4+ and CD8+ T cell responses  
AUTHOR: Feder-Mengus Chantal; Schultz-Thater Elke; Oertli Daniel; Marti  
Walter R; Heberer Michael; Spagnoli Giulio C; Zajac Paul (Reprint)  
AUTHOR ADDRESS: Univ Basel Hosp, Res Ctr, ICFS, Lab 404, Dept Surg, Oncol  
Grp, Hebelstr 20, CH-4031 Basel, Switzerland\*\*Switzerland  
AUTHOR E-MAIL ADDRESS: pzejac@uhbs.ch  
JOURNAL: Human Gene Therapy 16 (3): p348-360 MAR 05 2005  
ISSN: 1043-0342  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

7/3/6 (Item 6 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2008 The Thomson Corporation. All rts. reserv.

17934085 BIOSIS NO.: 200400304842  
Lentivirus vector-mediated expression of tumor-associated epitopes by human  
antigen presenting cells  
AUTHOR: Lizee Gregory; Gonzales Monica I; Topalian Suzanne L (Reprint)  
AUTHOR ADDRESS: Surg Branch Ctr Canc ResNIH, NCI, 10-2B47, Bethesda, MD,  
20892, USA\*\*USA  
AUTHOR E-MAIL ADDRESS: SuzanneTopalian@nih.gov  
JOURNAL: Human Gene Therapy 15 (4): p393-404 April 2004 2004  
MEDIUM: print  
ISSN: 1043-0342 \_(ISSN print)  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

7/3/7 (Item 7 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2008 The Thomson Corporation. All rts. reserv.

17794216 BIOSIS NO.: 200400161557  
Direct characterisation of adenovirus-specific T helper (Th)-cells in  
healthy adult donors.  
AUTHOR: Siegert Stefanie (Reprint); Rescher Ulrike; Chmielewicz Barbara;  
Frentsch Marco (Reprint); Ellerbrok Heinz; Radbruch Andreas (Reprint);  
Scheffold Alexander (Reprint); Thiel Andreas (Reprint)  
AUTHOR ADDRESS: Klinische Immunologie, Deutsches Rheuma-Forschungszentrum,  
Berlin, Germany\*\*Germany  
JOURNAL: Blood 102 (11): p53b November 16, 2003 2003  
MEDIUM: print  
CONFERENCE/MEETING: 45th Annual Meeting of the American Society of  
Hematology San Diego, CA, USA December 06-09, 2003; 20031206  
SPONSOR: American Society of Hematology  
ISSN: 0006-4971  
DOCUMENT TYPE: Meeting; Meeting Abstract  
RECORD TYPE: Abstract  
LANGUAGE: English

7/3/8 (Item 8 from file: 5)



DIALOG(R)File 5:Biosis Previews(R)  
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15856772 BIOSIS NO.: 200100028611

A subset of human monocyte-derived dendritic cells expresses high levels of interleukin-12 in response to combined CD40 ligand and interferon-gamma treatment

AUTHOR: Mosca Paul J; Hobeika Amy C; Clay Timothy M; Nair Smita K; Thomas Elaine K; Morse Michael A; Lysterly H Kim (Reprint)

AUTHOR ADDRESS: Departments of General and Thoracic Surgery, Pathology, and Immunology, Center for Genetic and Cellular Therapies, Duke University Medical Center, Durham, NC, 27710, USA\*\*USA

JOURNAL: Blood 96 (10): p3499-3504 November 15, 2000 2000

MEDIUM: print

ISSN: 0006-4971

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

7/3/9 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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17436617 PMID: 17406204

Live-cell assay to detect antigen-specific CD4+ T  
- \*\*\*cell\*\*\* responses by \*\*\*CD154\*\*\* expression.

Chattopadhyay Pratip K; Yu Joanne; Roederer Mario  
Immunotechnology Section, Vaccine Research Center, National Institute of Allergy and Infectious Diseases, National Institutes of Health, 40 Convent Drive, Bethesda, Maryland 20892, USA. pchattop@mail.nih.gov

Nature protocols (England) 2006, 1 (1) p1-6, ISSN 1750-2799--

Electronic Journal Code: 101284307

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

7/3/10 (Item 1 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

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143344742 CA: 143(19)344742z JOURNAL

A live-cell assay to detect antigen-specific CD4+ T cells with diverse cytokine profiles

AUTHOR(S): Chattopadhyay, Pratip K.; Yu, Joanne; Roederer, Mario

LOCATION: Immunotechnology Section, Vaccine Research Center, National Institute of Allergy and Infectious Disease, National Institutes of Health, Bethesda, MD, 20892, USA

JOURNAL: Nat. Med. (N. Y., NY, U. S.) (Nature Medicine (New York, NY, United States)) DATE: 2005 VOLUME: 11 NUMBER: 10 PAGES: 1113-1117

CODEN: NAMEF1 ISSN: 1078-8956 LANGUAGE: English PUBLISHER: Nature Publishing Group

7/3/11 (Item 2 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

(c) 2008 American Chemical Society. All rts. reserv.

140286138 CA: 140(18)286138g PATENT  
Method for detecting and isolating antigen specific T lymphocytes  
INVENTOR(AUTHOR): Frentsch, Marco; Rothe, Martin; Thiel, Andreas  
LOCATION: Germany,  
ASSIGNEE: Deutsches Rheuma-Forschungs Zentrum Berlin  
PATENT: PCT International ; WO 200427428 A1 DATE: 20040401  
APPLICATION: WO 2003EP9354 (20030822) \*EP 200290300 (20020823)  
PAGES: 42 pp. CODEN: PIXXD2 LANGUAGE: German  
PATENT CLASSIFICATIONS:

CLASS: G01N-033/569A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;  
CA; CH; CN; CO; CR; CU; CZ; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM;  
HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV;  
MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC;  
SD; SE; SG; SK; SL; SV; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU;  
ZA; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ DESIGNATED REGIONAL: GH; GM; KE  
; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW; AT; BE; BG; CH; CY; CZ; DE; DK;  
EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF;  
BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG  
? t s7/7/2,8,9

7/7/2 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2008 The Thomson Corporation. All rts. reserv.

0019901393 BIOSIS NO.: 200700561134

Identification and isolation of murine antigen-reactive T cells according  
to CD154 expression

AUTHOR: Kirchhoff Dennis; Frentsch Marco; Leclerk Patrick; Bumann Dirk;  
Rausch Sebastian; Hartmann Susanne; Thiel Andreas; Scheffold Alexander  
(Reprint)

AUTHOR ADDRESS: Deutsches Rheuma Forschungszentrum Berlin, Immunomodulat  
Grp, Charitepl 1, D-10117 Berlin, Germany\*\*Germany

AUTHOR E-MAIL ADDRESS: scheffold@drfz.de

JOURNAL: European Journal of Immunology 37 (9): p2370-2377 SEP 2007 2007

ITEM IDENTIFIER: doi:10.1002/eji.200737322

ISSN: 0014-2980

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: T helper (Th) cells are central regulators of adaptive immune  
responses. However, the \*\*\*detection\*\*\* of the small number of Th cells  
specific for a particular antigen or pathogen is still a major challenge.  
CD154 was recently introduced as a marker for antigen-specific Th cells.  
To date, this technology was not applicable for mice - arguably the most  
important immunological model system. \*\*\*CD154\*\*\* is difficult to detect  
due to its rapid removal from the cell surface upon binding to CD40  
during \*\*\*antigen\*\*\* - \*\*\*specific\*\*\* activation by APC. We present an  
efficient strategy to block the degradation of murine CD154 by  
combined use of antibodies against CD40 and \*\*\*CD154\*\*\*. This strategy  
makes CD154 easily accessible for surface staining, which allows  
isolation and expansion of rare \*\*\*antigen\*\*\*, \*\*\*specific\*\*\* Tcells.  
Importantly, CD154 identified all specific Tcells in strongly Th1-  
or Th2-polarized immune responses against pathogens like Salmonella  
typhimurium and Heligmosomoides polygyrus, independent of their potential  
to produce cytokines. We demonstrate that \*\*\*CD154\*\*\* can in fact be used  
as a reliable marker for antigen-specific CD4 T  
cells in mice, offering a unique option to analyze, isolate and  
rapidly expand the entire pool of Th-cells generated during a  
physiological \*\*\*T\*\*\* \*\*\*cell\*\*\* response in vivo.

7/7/8 (Item 8 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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15856772 BIOSIS NO.: 200100028611

A subset of human monocyte-derived dendritic cells expresses high levels of interleukin-12 in response to combined CD40 ligand and interferon-gamma treatment

AUTHOR: Mosca Paul J; Hobeika Amy C; Clay Timothy M; Nair Smita K; Thomas Elaine K; Morse Michael A; Lysterly H Kim (Reprint)

AUTHOR ADDRESS: Departments of General and Thoracic Surgery, Pathology, and Immunology, Center for Genetic and Cellular Therapies, Duke University Medical Center, Durham, NC, 27710, USA\*\*USA

JOURNAL: Blood 96 (10): p3499-3504 November 15, 2000 2000

MEDIUM: print

ISSN: 0006-4971

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Dendritic cells (DCs) may arise from multiple lineages and progress through a series of intermediate stages until fully mature, at which time they are capable of optimal antigen presentation and T-cell activation. High cell surface expression of CD83 is presumed to correlate with full maturation of DCs, and a number of agents have been shown to increase CD83 expression on DCs. We hypothesized that interleukin 12 (IL-12) expression would be a more accurate marker of functionally mature DCs capable of activating antigen-specific T

\*\*\*cells\*\*\*. We used combinations of signaling through CD40, using CD40 ligand trimer (CD40L), and interferon gamma to demonstrate that CD83 expression is necessary but not sufficient for optimal production of IL-12 by DCs. Phenotypically mature DCs could be induced to produce high levels of IL-12 p70 only when provided 2 simultaneous stimulatory signals. By intracellular cytokine detection, we determined that only a subset of cells that express high levels of CD80 and CD83 generate large amounts of IL-12. DCs matured with both signals are superior to DCs stimulated with the individual agents in activating antigen-specific T cell in vitro. These findings have important implications regarding the identification, characterization, and clinical application of functionally mature DCs.

7/7/9 (Item 1 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
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17436617 PMID: 17406204

Live-cell assay to detect antigen-specific CD4+ T

- \*\*\*cell\*\*\* responses by \*\*\*CD154\*\*\* expression.

Chattopadhyay Pratip K; Yu Joanne; Roederer Mario

Immunotechnology Section, Vaccine Research Center, National Institute of Allergy and Infectious Diseases, National Institutes of Health, 40 Convent Drive, Bethesda, Maryland 20892, USA. pchattop@mail.nih.gov

Nature protocols (England) 2006, 1 (1) p1-6, ISSN 1750-2799--

Electronic Journal Code: 101284307

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

This protocol details a method to identify CD4+ T cells that respond to antigens. The method relies on detection of CD154, a costimulatory cell surface protein that is expressed by CD4+ T cells upon activation, and can be used to purify live CD4+ T cells of diverse function. To detect CD154, fluorescently labeled antibodies are cultured with cell samples, peptides (or whole antigens) and monensin during a 6- to 24-h stimulation period. (Note that the assay is not compatible with brefeldin A.) After stimulation, cells are stained with any other antibodies of interest and then are analyzed by flow cytometry or purified by cell sorting. Unlike other assays, this method allows simultaneous assessment of other cell phenotypes or functions, is compatible with downstream RNA-based assays and preserves cell viability. This protocol can be completed in 9 h.

Record Date Created: 20070404

Record Date Completed: 20070621

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Set	Items	Description
S1	17	E1-E4
S2	4	AU='ROTHE MARTIN'
S3	100	AU='THIEL ANDREAS'
S4	58	(S1 OR S2 OR S3) AND (T(W)CELL? OR T(W)LYMPHOCYT?)
S5	39	RD S4 (unique items)
S6	23	(T(W)CELL? OR T(W)LYMPHOCYT?) (20N) (DETECT? OR DIAGNOS?) (20-N) (CD154 OR CD40L OR CD40(W)LIGAND) (20N) (ANTIGEN(W)SPECIFIC?)
S7	11	RD S6 (unique items)

? s (t(w)cell? or t(w)lymphocyt?) (20n) (detect? or diagnos?) (20n) (cd154 or cd40l or cd40(w)ligand) and (antigen(w)specific?) (20n) (t(w)cell? or t(w)lymphocyt?)

>>>File 5 processing for CELL? stopped at CELLULLTLS

>>>File 5 processing for CELL? stopped at CELLULLTLS

Processing

Processing

Processing

Processing

Processing

Processing

Processing

2190769 T

13189759 CELL?

807024 T(W)CELL?

2190769 T

1419886 LYMPHOCYT?

539811 T(W)LYMPHOCYT?

3679856 DETECT?

6432896 DIAGNOS?

3704 CD154

8335 CD40L

33865 CD40

532819 LIGAND

15952 CD40(W)LIGAND

355 (T(W)CELL? OR T(W)LYMPHOCYT?) (20N) (DETECT? OR DIAGNOS?) (20N) ((CD154 OR CD40L) OR CD40(W)LIGAND)

1510215 ANTIGEN

5033784 SPECIFIC?

2190769 T

13189759 CELL?

807024 T(W)CELL?

2190769 T

1419886 LYMPHOCYT?

539811 T(W)LYMPHOCYT?

30946 ANTIGEN(W)SPECIFIC? (20N) (T(W)CELL? OR T(W)LYMPHOCYT?)

S8 26 (T(W)CELL? OR T(W)LYMPHOCYT?) (20N) (DETECT? OR  
DIAGNOS?) (20N) (CD154 OR CD40L OR CD40(W)LIGAND) AND  
(ANTIGEN(W)SPECIFIC?) (20N) (T(W)CELL? OR T(W)LYMPHOCYT?)  
? rd s8  
S9 14 RD S8 (unique items)  
? t s9/3/all

9/3/1 (Item 1 from file: 5)  
DIALOG(R)File 5:BIOSIS Previews(R)  
(c) 2008 The Thomson Corporation. All rts. reserv.

0020089819 BIOSIS NO.: 200800136758  
Intracellular CD154 expression reflects antigen-specific CD8(+)  
T cells but shows less sensitivity than intracellular  
cytokine and MRC tetramer staining  
AUTHOR: Han Young Woo; Aleyas Abi G; George Junu A; Yoon Hyun A; Lee John  
Hwa; Kim Byung Sam; Eo Seong Kug (Reprint)  
AUTHOR ADDRESS: Chonbuk Natl Univ, Coll Vet Med, Dept Microbiol, Jeonju  
561756, South Korea\*\*South Korea  
AUTHOR E-MAIL ADDRESS: vetvirus@chonbuk.ac.kr  
JOURNAL: Journal of Microbiology and Biotechnology 17 (12): p1955-1964 DEC  
2007 2007  
ISSN: 1017-7825\_(print) 1738-8872\_(electronic)  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

9/3/2 (Item 2 from file: 5)  
DIALOG(R)File 5:BIOSIS Previews(R)  
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0019607433 BIOSIS NO.: 200700267174  
B cells play a cooperative role via CD40L-CD40 interaction in T  
cell-mediated experimental autoimmune neuritis in Lewis rats  
AUTHOR: Zhu Wei; Mix Eilhard; Jin Tao; Adem Abdu; Zhu Jie (Reprint)  
AUTHOR ADDRESS: Karolinska Univ Hosp Huddinge, Dept Neurobiol, Div  
Neurodegenerat and Neuroinflamm, Karolinska Inst, Novum, Plan 5, S-14186  
Huddinge, Sweden\*\*Sweden  
AUTHOR E-MAIL ADDRESS: Jie.Zhu@ki.se  
JOURNAL: Neurobiology of Disease 25 (3): p642-648 MAR 2007 2007  
ISSN: 0969-9961  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

9/3/3 (Item 3 from file: 5)  
DIALOG(R)File 5:BIOSIS Previews(R)  
(c) 2008 The Thomson Corporation. All rts. reserv.

0019600723 BIOSIS NO.: 200700260464  
Primary antigen-specific B cells: A novel approach to cellular-based  
immunotherapy.  
AUTHOR: Ahmadi Tahanitan (Reprint); Weizmann Nathalie; Efebera Yvonne A;  
Sherr David H  
AUTHOR ADDRESS: Boston Univ, Sch Publ Hlth, Boston, MA USA\*\*USA  
JOURNAL: Blood 108 (11, Part 1): p1061A-1062A NOV 16 2006 2006  
CONFERENCE/MEETING: 48th Annual Meeting of the  
American-Society-of-Hematology Orlando, FL, USA December 09 -12, 2006;  
20061209

SPONSOR: Amer Soc Hematol  
ISSN: 0006-4971  
DOCUMENT TYPE: Meeting; Meeting Poster  
RECORD TYPE: Abstract  
LANGUAGE: English

9/3/4 (Item 4 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2008 The Thomson Corporation. All rts. reserv.

18318845 BIOSIS NO.: 200510013345  
Nonreplicating recombinant vaccinia virus expressing CD40 ligand enhances  
APC capacity to stimulate specific CD4+ and CD8+ T cell responses  
AUTHOR: Feder-Mengus Chantal; Schultz-Thater Elke; Oertli Daniel; Marti  
Walter R; Heberer Michael; Spagnoli Giulio C; Zajac Paul (Reprint)  
AUTHOR ADDRESS: Univ Basel Hosp, Res Ctr, ICFS, Lab 404, Dept Surg, Oncol  
Grp, Hebelstr 20, CH-4031 Basel, Switzerland\*\*Switzerland  
AUTHOR E-MAIL ADDRESS: pzajac@uhbs.ch  
JOURNAL: Human Gene Therapy 16 (3): p348-360 MAR 05 2005  
ISSN: 1043-0342  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

9/3/5 (Item 5 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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17794216 BIOSIS NO.: 200400161557  
Direct characterisation of adenovirus-specific T helper (Th)-cells in  
healthy adult donors.  
AUTHOR: Siegert Stefanie (Reprint); Rescher Ulrike; Chmielewicz Barbara;  
Frentsch Marco (Reprint); Ellerbrok Heinz; Radbruch Andreas (Reprint);  
Scheffold Alexander (Reprint); Thiel Andreas (Reprint)  
AUTHOR ADDRESS: Klinische Immunologie, Deutsches Rheuma-Forschungszentrum,  
Berlin, Germany\*\*Germany  
JOURNAL: Blood 102 (11): p53b November 16, 2003 2003  
MEDIUM: print  
CONFERENCE/MEETING: 45th Annual Meeting of the American Society of  
Hematology San Diego, CA, USA December 06-09, 2003; 20031206  
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DIALOG(R)File 5:Biosis Previews(R)  
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16626671 BIOSIS NO.: 200200220182  
Study of the Secondary Lymphoid Tissue chemokine (SLC) plus CD40L for  
immune therapy of lymphoma  
AUTHOR: Tolba Khaled A (Reprint); Bowers William; Hi Kyueng H; Houseknecht  
Vicki (Reprint); Guiliano Rita; Federoff Howard J; Rosenblatt Joseph D  
AUTHOR ADDRESS: James P Wilmot Cancer Center, University of Rochester,  
Rochester, NY, USA\*\*USA  
JOURNAL: Blood 98 (11 Part 1): p612a November 16, 2001 2001

MEDIUM: print  
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001; 20011207  
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DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster  
RECORD TYPE: Abstract  
LANGUAGE: English

9/3/7 (Item 7 from file: 5)  
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16271915 BIOSIS NO.: 200100443754  
High frequency of circulating HBcAg-specific CD8 T cells in hepatitis B infection: A flow cytometric analysis  
AUTHOR: Matsumura S; Yamamoto K (Reprint); Shimada N; Okano N; Okamoto R; Suzuki T; Hakoda T; Mizuno M; Higashi T; Tsuji T  
AUTHOR ADDRESS: First Department of Internal Medicine, Okayama University Medical School, 2-5-1, Shikata-cho, Okayama, 700-8558, Japan\*\*Japan  
JOURNAL: Clinical and Experimental Immunology 124 (3): p435-444 June, 2001  
2001  
MEDIUM: print  
ISSN: 0009-9104  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

9/3/8 (Item 8 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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16139697 BIOSIS NO.: 200100311536  
The role of 4-1BB ligand in CD8+ T cell responses in vitro  
AUTHOR: Galy Anne (Reprint); Laderach Diego (Reprint)  
AUTHOR ADDRESS: Barbara Ann Karmanos Cancer Institute, Wayne State University, Detroit, MI, USA\*\*USA  
JOURNAL: Blood 96 (11 Part 1): p240a-241a November 16, 2000 2000  
MEDIUM: print  
CONFERENCE/MEETING: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000; 20001201  
SPONSOR: American Society of Hematology  
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DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster  
RECORD TYPE: Abstract  
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9/3/9 (Item 9 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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13405386 BIOSIS NO.: 199699039446  
CD40L-deficient mice show deficits in antiviral immunity and have an impaired memory CD8+ CTL response  
AUTHOR: Borrow Persephone; Tishon Antoinette; Lee Sherina; Xu Jianchao; Grewal Iqbal S; Oldstone Michael B A (Reprint); Flavell Richard A  
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JOURNAL: Journal of Experimental Medicine 183 (5): p2129-2142 1996 1996  
ISSN: 0022-1007  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

9/3/10 (Item 1 from file: 73)  
DIALOG(R)File 73:EMBASE  
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0076474603 EMBASE No: 1996152206  
Studying immunological tolerance by physically monitoring antigen-specific T cells in vivo  
Khoruts A.; Jenkins M.K.  
Department of Microbiology, University of Minnesota Medical School, 420 Delaware Street S.E., Minneapolis, MN 55455, United States  
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Annals of the New York Academy of Sciences ( ANN. NEW YORK ACAD. SCI. ) ( United States) May 28, 1996, 778/- (72-79)  
CODEN: ANYAA ISSN: 00778923  
DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract  
LANGUAGE: English SUMMARY LANGUAGE: English  
NUMBER OF REFERENCES: 43

9/3/11 (Item 1 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
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17436617 PMID: 17406204  
Live-cell assay to detect antigen-specific CD4+ T  
- \*\*\*cell\*\*\* responses by \*\*\*CD154\*\*\* expression.  
Chattopadhyay Pratip K; Yu Joanne; Roederer Mario  
Immunotechnology Section, Vaccine Research Center, National Institute of Allergy and Infectious Diseases, National Institutes of Health, 40 Convent Drive, Bethesda, Maryland 20892, USA. pchattop@mail.nih.gov  
Nature protocols (England) 2006, 1 (1) p1-6, ISSN 1750-2799--  
Electronic Journal Code: 101284307  
Publishing Model Print  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: MEDLINE; Completed

9/3/12 (Item 1 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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143344742 CA: 143(19)344742z JOURNAL  
A live-cell assay to detect antigen-specific CD4+ T cells with diverse cytokine profiles  
AUTHOR(S): Chattopadhyay, Pratip K.; Yu, Joanne; Roederer, Mario  
LOCATION: ImmunoTechnology Section, Vaccine Research Center, National Institute of Allergy and Infectious Disease, National Institutes of Health, Bethesda, MD, 20892, USA



JOURNAL: Nat. Med. (N. Y., NY, U. S.) (Nature Medicine (New York, NY, United States)) DATE: 2005 VOLUME: 11 NUMBER: 10 PAGES: 1113-1117  
CODEN: NAMEFI ISSN: 1078-8956 LANGUAGE: English PUBLISHER: Nature Publishing Group

9/3/13 (Item 2 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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140286138 CA: 140(18)286138g PATENT  
Method for detecting and isolating antigen specific T lymphocytes  
INVENTOR(AUTHOR): Frentsch, Marco; Rothe, Martin; Thiel, Andreas  
LOCATION: Germany,  
ASSIGNEE: Deutsches Rheuma-Forschungs Zentrum Berlin  
PATENT: PCT International ; WO 200427428 A1 DATE: 20040401  
APPLICATION: WO 2003EP9354 (20030822) \*EP 200290300 (20020823)  
PAGES: 42 pp. CODEN: PIXXD2 LANGUAGE: German  
PATENT CLASSIFICATIONS:  
CLASS: G01N-033/569A  
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;  
CA; CH; CN; CO; CR; CU; CZ; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM;  
HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV;  
MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC;  
SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU;  
ZA; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ DESIGNATED REGIONAL: GH; GM; KE  
; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW; AT; BE; BG; CH; CY; CZ; DE; DK;  
EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF;  
BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

9/3/14 (Item 3 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
(c) 2008 American Chemical Society. All rts. reserv.

130251215 CA: 130(19)251215w PATENT  
Catalytic antibodies and a method of producing same  
INVENTOR(AUTHOR): Koentgen, Frank; Suess, Gabriele Maria; Tarlinton,  
David Mathew; Treutlein, Herbert Rudolf  
LOCATION: Australia  
ASSIGNEE: Amrad Operations Pty. Ltd.  
PATENT: PCT International ; WO 9915563 A1 DATE: 19990401  
APPLICATION: WO 98AU783 (19980918) \*AU 979306 (19970919)  
PAGES: 101 pp. CODEN: PIXXD2 LANGUAGE: English  
PATENT CLASSIFICATIONS:  
CLASS: C07K-016/00A; C12N-015/19B  
DESIGNATED COUNTRIES: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN;  
CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; GM; HR; HU; ID; IL; IS; JP; KE; KG;  
KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL;  
PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; US; UZ; VN; YU;  
ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS  
; MW; SD; SZ; UG; ZW; AT; BE; BG; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT;  
LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML; MR; NE; SN; TD;  
TG  
? t s9/7/all

9/7/1 (Item 1 from file: 5)  
DIALOG(R)File 5:BIOSIS Previews(R)  
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0020089819 BIOSIS NO.: 200800136758

Intracellular CD154 expression reflects antigen-specific CD8(+) T cells but shows less sensitivity than intracellular cytokine and MHC tetramer staining  
AUTHOR: Han Young Woo; Aleyas Abi G; George Junu A; Yoon Hyun A; Lee John Hwa; Kim Byung Sam; Eo Seong Kug (Reprint)  
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JOURNAL: Journal of Microbiology and Biotechnology 17 (12): p1955-1964 DEC 2007 2007  
ISSN: 1017-7825\_(print) 1738-8872\_(electronic)  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: A recent report showed that analysis of CD 154 expression in the presence of the secretion inhibitor Brefeldin A (Bref A) could be used to assess the entire repertoire of antigen-specific CD4(+) T helper cells. However, the capacity of intracellular CD 154 expression to identify antigen-specific CD8(+) T cells has yet to be investigated. In this study, we compared the ability of intracellular CD154 expression to assess antigen-specific CD8(+) T cells with that of accepted standard assays, namely intracellular cytokine IFN-gamma staining (ICS) and MHC class I tetramer staining. The \*\*\*detection\*\*\* of intracellular \*\*\*CD154\*\*\* molecules in the presence of Bref A reflected the kinetic trend of antigen-specific CD8(+) T cell number, but unfortunately showed less sensitivity than ICS and tetramer staining. However, ICS levels peaked and saturated 8 h after antigenic stimulation in the presence of Bref A and then declined, whereas intracellular CD154 expression peaked by 8 h and maintained the saturated level up to 24 h post-stimulation. Moreover, intracellular CD 154 expression in antigen-specific CD8(+) T cells developed in the absence of CD4(+) T cells changed little, whereas the number of IFN-gamma-producing CD8(+) \*\*\*T\*\*\* \*\*\*cells\*\*\* decreased abruptly. These results suggest that intracellular CD154 could aid the assessment of antigen-specific CD8(+) T cells, but does not have as much ability to identify heterogeneous CD4(+) T helper cells. Therefore, the combined analytical techniques of ICS and tetramer staining together with intracellular CD154 assays may be able to provide useful information on the accurate phenotype and functionality of antigen-specific CD8(+) \*\*\*T\*\*\* \*\*\*cells\*\*\* .

9/7/2 (Item 2 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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0019607433 BIOSIS NO.: 200700267174  
B cells play a cooperative role via CD40L-CD40 interaction in T cell-mediated experimental autoimmune neuritis in Lewis rats  
AUTHOR: Zhu Wei; Mix Eilhard; Jin Tao; Adem Abdu; Zhu Jie (Reprint)  
AUTHOR ADDRESS: Karolinska Univ Hosp Huddinge, Dept Neurobiol, Div Neurodegenerat and Neuroinflamm, Karolinska Inst, Novum, Plan 5, S-14186 Huddinge, Sweden\*\*Sweden  
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JOURNAL: Neurobiology of Disease 25 (3): p642-648 MAR 2007 2007  
ISSN: 0969-9961  
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LANGUAGE: English

**ABSTRACT:** The expression of co-stimulatory molecules CD40 and CD40L was examined over the course of experimental autoimmune neuritis (EAN) induced in Lewis rats by immunization with bovine peripheral nerve myelin. In draining lymph nodes, highest level of CD40L expression was seen on day 7 post immunization (p.i.), i.e. before onset of clinical signs of EAN, while CD40 expression was increased on day 14 p.i., i.e. at peak of clinical disease. In contrast, both CD40 and \*\*\*CD40L\*\*\* expressing cells in sciatic nerves, a target organ of EAN, peaked on day 14 p.i., large numbers of both expressing cells were mainly \*\*\*detected\*\*\* on day 14-21 p.i. After co-culture with EAN rat B cells bearing CD40, PO peptide 180-199-specific T cell line cells exhibited a rapid downregulation of \*\*\*CD40L\*\*\* expression. Furthermore, FAN rats had enhanced PO peptide 180-199-specific antibody responses on day 74 p.i., which might have contributed to their aggravated EAN and further demonstrated the role of antibodies in EAN. The results indicate that CD40L-CD40 interactions are involved in the initiation of the antigen-specific T cell responses associated with the generation and development of EAN, and may mediate autoantibody production in EAN. Evidently, B cells play a cooperative role via CD40L-CD40 interaction in T cell-mediated FAN of Lewis rats. (c) 2006 Elsevier Inc. All rights reserved.

9/7/3 (Item 3 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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0019600723 BIOSIS NO.: 200700260464

Primary antigen-specific B cells: A novel approach to cellular-based immunotherapy.

AUTHOR: Ahmadi Tahanitan (Reprint); Weizmann Nathalie; Efebera Yvonne A; Sherr David H

AUTHOR ADDRESS: Boston Univ, Sch Publ Hlth, Boston, MA USA\*\*USA

JOURNAL: Blood 108 (11, Part 1): p1061A-1062A NOV 16 2006 2006

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SPONSOR: Amer Soc Hematol

ISSN: 0006-4971

DOCUMENT TYPE: Meeting; Meeting Poster

RECORD TYPE: Abstract

LANGUAGE: English

**ABSTRACT:** Background: The potential for CD40 ligand (CD40L)-activated B cells to serve as antigen-presenting cells (APC) for cell-based immunotherapy has been suggested. Unlike dendritic cells (DC), CD40L-activated B cell populations are readily expandable in vitro. In addition, antigen-specific B cells may efficiently uptake, process, and present cognate protein antigens. Nevertheless, important questions regarding the relative efficacy of CD40L-activated B cells as cell-based vaccines remain. Here, we exploited the unique ability of B cells to uptake antigen through their B cell receptor (BCR) and the propensity for CD40L-activated B cells, including antigen-specific clones, to grow in culture and to process cognate protein antigens to determine if CD40L-activated B cells represent a suitable substitute for dendritic cells for cell-based immunotherapy. Methods: As a head to head comparison between CD40L-activated B cells and mature DC, CD40L-activated B cells and bone marrow-derived DC were pulsed with MHC II- or MHC I-restricted self protein-derived (MOG; MBP) peptides and tested for their ability to induce proliferation of CD4(+) or CD8(+) clones. To compare processing

and presentation of foreign protein antigens, C57BL/6 mice were immunized with 200 µg NP-BSA or an equivalent volume of PBS emulsified in CFA, sacrificed 10 days later and splenocytes obtained to generate

\*\*\*antigen\*\*\* - \*\*\*specific\*\*\* CD40L-activated B cells and T \*\*\*cells\*\*\*

Bone marrow cells from PBS/CFA immunized mice were used to generate DCs. CD40L-activated (antigen-specific) B cells and DC were pulsed with NP-BSA, NP-CGG, or BSA and assayed for their ability to induce proliferation of primary \*\*\*T\*\*\* \*\*\*cells\*\*\*. Results: B cell populations were readily expanded by culture on CD40L transfected L cells. \*\*\*CD40L\*\*\* stimulation significantly up-regulated MHC class I and II expression and induced expression of CD80 and CD86 to levels similar to those \*\*\*detected\*\*\* on mature DCs. \*\*\*CD40L\*\*\*-activated B cells were comparable to DCs when presenting MHC class I- or II-restricted self-peptides to \*\*\*T\*\*\* \*\*\*cell\*\*\* clones. When presenting cognate protein antigen (NP-BSA or BSA) to primary T cells, CD40L-activated B cells from NP-BSA immunized mice were as efficient as DC, both of which induced a 13-15 fold increase in T cell proliferation. To determine if the hapten moiety is sufficient to increase antigen up-take and presentation, DCs and CD40L-activated B cells from NP-BSA immunized mice were pulsed with NP-CGG and used as APC for T cells from NP-BSA immunized mice. DCs induced significant responses comparable to those seen with BSA and NP-BSA. Activated B cells from NP-BSA-immunized mice induced significantly higher responses to NP-CGG than activated B cells from control PBS/CFA "immunized" mice, although these responses were lower than those generated with dendritic cells. Conclusion: 1) CD40L-activated B cells can be readily expanded in vitro and significantly up-regulate co-stimulatory molecules CD80 and CD86 to levels comparable to mature DCs, 2) CD40L-activated B cells present MHC class I- and II-restricted self-peptides to T cell clones as efficiently as mature DCs, 3) Antigen-primed B cells are as efficient at presenting cognate protein antigens as DCs, 4) Immunization with a hapten-carrier is sufficient to induce hapten-specific B cells which, when activated with CD40L, effectively present unrelated neoantigens conjugated with the hapten. The data suggest that CD40L-activated B cells represent an important alternative APC for immunotherapy, particularly when previously educated to protein or haptenic determinants.

9/7/4 (Item 4 from file: 5)  
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18318845 BIOSIS NO.: 200510013345  
Nonreplicating recombinant vaccinia virus expressing CD40 ligand enhances APC capacity to stimulate specific CD4+ and CD8+ T cell responses  
AUTHOR: Feder-Mengus Chantal; Schultz-Thater Elke; Oertli Daniel; Marti Walter R; Heberer Michael; Spagnoli Giulio C; Zajac Paul (Reprint)  
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JOURNAL: Human Gene Therapy 16 (3): p348-360 MAR 05 2005  
ISSN: 1043-0342  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: Recombinant poxviruses expressing immunomodulatory molecules together with specific antigens represent powerful vaccines for cancer immunotherapy. Recently, we and others have demonstrated, in vitro and in vivo, that coexpression of CD80 and CD86 costimulatory molecules enhances

the immunogenic capacity of a recombinant vaccinia virus (rVV) encoding different tumor-associated antigens. To further investigate the capacity of these vectors to provide ligands for different costimulatory pathways relevant in the generation of T cell responses, we constructed a recombinant virus (rVV) expressing CD40 ligand or CD154 (CD154rVV). Upon binding the CD40 receptor expressed on antigen presenting cells (APC), this molecule, physiologically expressed on activated CD4(+) T cells, increases their antigen presentation and immunostimulatory capacities. Therefore, we evaluated the effects of CD154rVV infection on APC activation and its consequences on T cell stimulation. CD154rVV infection of autologous fibroblasts, monocytes, or IDC promoted the expression of a number of cytokines, including GM-CSF, TNF-alpha, and IL-15 in IDC. Most importantly, IL-12 p40 gene expression and protein secretion were induced by CD154rVV but not by wild-type VV (WT VV) in either CD14(+) cells or IDC, and these effects could be blocked by anti-CD40 monoclonal antibodies. Furthermore, phenotypic characterization of CD154rVV infected IDC revealed enhanced expression of CD83 and CD86 surface markers as compared with wild-type vaccinia virus infection. As expected, VV infection triggered cytokines gene expression in cultures including APC and \*\*\*T\*\*\* \*\*cells\*\*\* from VV immune donors. However, cytokine genes typically expressed by T cell receptor triggered T cells such as those encoding IL-2 and IFN-gamma, or T cell proliferation, were detectable to a significantly higher extent in CD154rVV infected cultures, as compared with WT VV. Activation of specific CD8(+) \*\*\*T\*\*\* \*\*cells\*\*\* was then investigated using MART-1/Melan-A(27-35) epitope as the model of tumor-associated antigen (TAA). In the presence of CD154rVV activated APCs, significantly higher numbers of specific cytotoxic CD8(+) T cells were detected, as compared with cultures performed in the presence of WT VV or in the absence of virus. Taken together, these data indicate that functional CD154 expression from rVV infected cells promotes APC activation, thereby enhancing antigen-specific T \*\*\*cell\*\*\* generation. Such a recombinant vector might help bypass the requirement for activated helper cells during CTL priming, thus qualifying as a potentially relevant vector in the generation of CD8(+) T cell responses in cancer immunotherapy.

9/7/5 (Item 5 from file: 5)  
 DIALOG(R)File 5:Biosis Previews(R)  
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17794216 BIOSIS NO.: 200400161557  
 Direct characterisation of adenovirus-specific T helper (Th)-cells in healthy adult donors.  
 AUTHOR: Siegert Stefanie (Reprint); Rescher Ulrike; Chmielewicz Barbara; Frentsch Marco (Reprint); Ellerbrok Heinz; Radbruch Andreas (Reprint); Scheffold Alexander (Reprint); Thiel Andreas (Reprint)  
 AUTHOR ADDRESS: Klinische Immunologie, Deutsches Rheuma-Forschungszentrum, Berlin, Germany\*\*Germany  
 JOURNAL: Blood 102 (11): p53b November 16, 2003 2003  
 MEDIUM: print  
 CONFERENCE/MEETING: 45th Annual Meeting of the American Society of Hematology San Diego, CA, USA December 06-09, 2003; 20031206  
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 LANGUAGE: English

ABSTRACT: Background and Aims: Adenovirus (Ad) infections have been

increasingly recognised as an important cause of morbidity and mortality in allogeneic stem cell transplant recipients, especially in children. Immune responses to Ad infection are not fully understood, but T-cell mediated immunity appears to be important for recovery. The target proteins of Ad and their epitopes are still unknown. The aim of the present study was to evaluate and characterise Ad-specific T-cell responses in healthy adult donors. Methods: T cell responses to different Ad serotypes were investigated in healthy adult donors using a short-term stimulation assay. Whole blood was stimulated for 6 hours with anti-CD28 and different antigens (e.g. Ad2, 3, 4, 7, 12 lysates, control lysates, SEB, CMV lysate) in the presence of the secretion inhibitor Brefeldin A. After stimulation, cells were stained for CD69, CD4 and TNF-alpha for FACS analysis. In order to assess the complete fraction of Ad-specific CD4+ Th-cells we also tested the expression of antigen-reactive CD154 (CD40L), as a marker for antigen-specific Th-cells while antigen-reactive TNF-alpha was used to evaluate proinflammatory Th-cells. Results: Ad-specific \*\*\*T\*\*\* \*\*cells\*\*\* reactive to at least one of the used lysates could be detected in all of the adult donors analysed. In response to Ad3 lysate 0.06% of CD4+ \*\*\*T\*\*\* - \*\*cells\*\*\* became CD69+/TNF-alpha+ (median; range 0.03-0.29%; n=13) compared with 0.01% for anti-CD28 alone or control lysate. Analysis of Ad3-reactive CD154+ expression always revealed slightly higher percentages as compared to TNF-alpha+ expression (0.1%; 0.04-0.79% vs. 0.06%; 0.03-0.29%, n=13). This indicates the feasibility of antigen-reactive CD154 expression after short-term in vitro stimulation for the assessment of the entire repertoire of Th-cells specific for a particular antigen or mixtures of antigens. Of interest, the frequency of specific T cells varied from donor to donor. For example, Ad7 lysate induced strong CD4+ Th-cell responses only in selected donors. In one particular healthy donor nearly 5 in 1,000 CD4+ Th-cells (CD4+/CD69+/TNF-alpha+: 0.45% vs. 0.05% control lysate) reacted upon stimulation with Ad7. Conclusions: Our results confirm the previous assumption that Ad-specific Th-cells in human adults may be characterised by widespread crossreactivities for different Ad serotypes. However, since distinct Ad serotypes elicit immune responses only in selected adult donors further analysis of the fine specificities of these Th-cell responses are necessary. Moreover, this will be a prerequisite in order to define protective Ad-specific T-cell responses to develop protocols for specific adoptive immunotherapies in allogeneic stem cell transplantation.

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16626671 BIOSIS NO.: 200200220182  
 Study of the Secondary Lymphoid Tissue chemokine (SLC) plus CD40L for immune therapy of lymphoma  
 AUTHOR: Tolba Khaled A (Reprint); Bowers William; Hi Kyueng H; HouseKnecht Vicki (Reprint); Guiliano Rita; Federoff Howard J; Rosenblatt Joseph D  
 AUTHOR ADDRESS: James P Wilmot Cancer Center, University of Rochester, Rochester, NY, USA\*\*USA  
 JOURNAL: Blood 98 (11 Part 1): p612a November 16, 2001 2001  
 MEDIUM: print  
 CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001; 20011207  
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LANGUAGE: English

**ABSTRACT:** The development of an effective anti-tumor immune response is dependent on timely interaction of several effector cells. Secondary Lymphoid Tissue chemokine (SLC) is a key molecule in initiating antigen-specific immune responses within lymph nodes and Peyer's patches by promoting the co-localization of both naive and non-polarized \*\*\*T\*\*\* - \*\*\*cells\*\*\* and dendritic cells (DCs). In addition the chemotactic activity of SLC for natural killer (NK) cells may further enhance recruitment of anti-tumor effector cells. We have studied the anti-tumor activity of SLC in two murine models, A20, a B-cell lymphoma, and CT26, an adenocarcinoma. Murine cDNA encoding SLC was subcloned into an HSV amplicon vector and packaged using an HSV helper virus containing amplicon packaging system. Administration of HSV amplicons encoding SLC (HSV-SLC) into previously established subcutaneous A20 and CT26 tumors resulted in heavy infiltration with CD4+, CD8+ T-cells and dendritic cells (DCs). HSV-SLC administration resulted in complete regression in unilateral A20 tumors (70-80% in several experiments) and a sharply reduced growth rate in the CT26 model relative to uninjected or HSV-LacZ control injected tumors. Cytolytic T-cell activity was induced by HSV-SLC administration in both the A20 and CT26 models. We sought to further improve the anti-tumor activity by in situ activation of DCs recruited by SLC. Ligation of CD40 receptor on DCs has been shown to induce maturation, enhance antigen presentation and facilitate priming of naive T-cells. Combined transduction of either A20 or CT26 tumors with HSV-SLC and HSV-CD40L resulted in a better anti-tumor activity than seen with either vector alone in both tumor models (80% vs 45-55% with either vector alone in bilateral tumors). In order to study the molecular events underlying the anti-tumor activity seen in responding mice, we extracted mRNA from regressing tumors treated with either HSV-SLC, HSV-CD40L or the combination as well HSV-lac and mock-treated control tumors. We measured expression of gamma-interferon, perforin and IL-12 (both the p35 and p40 subunits) mRNA by RT-PCR. Regressing tumors expressed detectable levels of gamma-interferon, perforin and IL-12 mRNA in comparison to non-regressing tumors. We found that induction of mRNA for the p40 subunit of IL-12, necessary for the generation of a functional IL-12 p70 dimer was restricted to regressing tumors while constitutive expression of p35 IL-12 subunit mRNA was detected in both regressing and non-regressing tumors. In addition to identifying a potent anti-tumor immune strategy, local elaboration of SLC and CD40L may mimic the lymph node conditions necessary for priming naive T-cells within the tumor bed. These results also highlight the impact of DC activation status on the ability to present antigen and elaborate cytokines to prime newly recruited T-cells.

9/7/7 (Item 7 from file: 5)  
DIALOG(R)File 5: Biosis Previews(R)  
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16271915 BIOSIS NO.: 200100443754  
High frequency of circulating HBcAg-specific CD8 T cells in hepatitis B infection: A flow cytometric analysis  
AUTHOR: Matsumura S; Yamamoto K (Reprint); Shimada N; Okano N; Okamoto R; Suzuki T; Hakoda T; Mizuno M; Higashi T; Tsuji T  
AUTHOR ADDRESS: First Department of Internal Medicine, Okayama University Medical School, 2-5-1, Shikata-cho, Okayama, 700-8558, Japan\*\*Japan  
JOURNAL: Clinical and Experimental Immunology 124 (3): p435-444 June, 2001  
2001  
MEDIUM: print  
ISSN: 0009-9104

DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

**ABSTRACT:** Viral antigen-specific T cells are important for virus elimination. We studied the hepatitis B virus (HBV)-specific \*\*\*T\*\*\* response using flow cytometry. Three phases of HBV infection were studied: Group A, HBeAg (+) chronic hepatitis; Group B, HBeAb (+) HBV carrier after seroconversion; and Group C, HBeAb (+) phase. Peripheral T cells were incubated with recombinant HB core antigen (HBcAg), and intracytoplasmic cytokines were analysed by flow cytometry. HBcAg-specific CD4 and CD8 T cells were identified in all three groups and the number of IFN-gamma-positive T cells was greater than TNF-alpha-positive T cells. The frequency of IFN-gamma-positive CD4 and CD8 T cells was highest in Group C, compared with Groups A and B. No significant difference in the HBcAg-specific T cell response was observed between Group A and Group B. The HBcAg-specific CD8 T cell response was diminished by CD4 depletion, addition of antibody against human leucocyte antigen (HLA) class I, class II or \*\*\*CD40L\*\*\*. Cytokine-positive CD8 T cells without HBcAg stimulation were present at a high frequency (7 of 13 cases) in Group B, but were rare in other groups. HBcAg-specific T cells can be detected at high frequency by a sensitive flow cytometric analysis, and these cells are important for controlling HBV replication.

9/7/8 (Item 8 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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16139697 BIOSIS NO.: 200100311536  
The role of 4-1BB ligand in CD8+ T cell responses in vitro  
AUTHOR: Galy Anne (Reprint); Laderach Diego (Reprint)  
AUTHOR ADDRESS: Barbara Ann Karman Cancer Institute, Wayne State University, Detroit, MI, USA\*\*USA  
JOURNAL: Blood 96 (11 Part 1): p240a-241a November 16, 2000 2000  
MEDIUM: print  
CONFERENCE/MEETING: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000; 20001201  
SPONSOR: American Society of Hematology  
ISSN: 0006-4971  
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster  
RECORD TYPE: Abstract  
LANGUAGE: English

**ABSTRACT:** The molecule 4-1BB and its ligand, 4-1BB ligand, are members of the TNF family of proteins and are respectively expressed on T cells and on antigen-presenting cells (APC). Murine experiments have shown the importance of 4-1BB ligand for the induction and maintenance of antiviral immunity in vivo. However, the mechanisms by which 4-1BB ligand affects CD8+-mediated T cell responses are not well understood, particularly in humans. Therefore, we investigated the role of this molecule on the priming of naive CD8+ T cell responses in vitro and analyzed the regulation of 4-1BB ligand on professional and non-professional antigen-presenting cells (APC). On resting T cells, we confirmed that 4-1BB was undetectable by flow cytometry but was rapidly and transiently up-regulated by TCR engagement, peaking at day 1. Based on these kinetics we tested the effects of 4-1BB ligand on T cell priming by adding this molecule to T cells one day after antigen presentation. Non-professional APCs such as allogeneic lymphoblastoid cells or monocytes pulsed with fluMFP peptide were used to present antigen. Priming naive T cells with



these suboptimal APCs resulted in little or no specific response after 2 weeks of culture. However, in the presence of 4-1BB ligand, we observed a dramatic increase in specific cytotoxicity and in release of IFNgamma by CD8+ \*\*\*T\*\*\* \*\*cells\*\*\*. Analysis of \*\*\*antigen\*\*\* - \*\*\*specific\*\*\* T cells showed expansion of IFNgamma-producing T cells and of flumMP-tetramer positive cells in the presence of 4-1BB ligand. These results show that 4-1BB ligand is important to sustain the priming of human CD8+ T cell responses. To further understand the role of 4-1BB ligand we examined its expression on dendritic cells (DC) because these professional APC, unlike other APCs, are able to prime naive T cell responses on their own. DC were prepared by culture of progenitor cells. Using flow cytometry we detected moderate to high levels of 4-1BB ligand depending on developmental conditions. The highest levels of 4-1BB ligand were found on DC produced by culture of progenitor cells with the cytokines flt-3 ligand, c-kit ligand, GM-CSF, IL-1 and IL-7. Maturation-inducing signals such as TNF-alpha and CD40-ligand reduced expression of 4-1BB ligand on those DC. Monocytes and B lymphoblastoid cell lines expressed detectable levels of 4-1BB ligand. Thus, our results show that 4-1BB ligand plays an important role in the priming of human CD8+ T cell responses and that the expression of 4-1BB ligand is highly regulated on APCs. Further studies are required to understand how 4-1BB regulation on APC correlates with the ability to activate naive T cells.

9/7/9 (Item 9 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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13405386 BIOSIS NO.: 199699039446  
CD40L-deficient mice show deficits in antiviral immunity and have an impaired memory CD8+ CTL response  
AUTHOR: Borrow Persephone; Tishon Antoinette; Lee Sherina; Xu Jianchao; Grewal Iqbal S; Oldstone Michael B A (Reprint); Flavell Richard A  
AUTHOR ADDRESS: Dep. Neuropharmacol., Div. Virol., Scripps Res. Inst., 10666 North Torrey Pines Rd., La Jolla, CA 92037, USA\*\*USA  
JOURNAL: Journal of Experimental Medicine 183 (5): p2129-2142 1996 1996  
ISSN: 0022-1007  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

ABSTRACT: The ligand for CD40 (CD40L) is expressed on the surface of activated CD4+ T cells and its role in T-B cell collaborations and thymus-dependent humoral immunity is well established. Recently, by generating CD40L-knockout mice, we have confirmed its previously described role in humoral immunity and defined another important function of this molecule in the in vivo clonal expansion of antigen-\*\*\*specific\*\*\* CD4+ \*\*\*T\*\*\* \*\*cells\*\*\*. Here, we investigated the potential in vivo role of CD40L in antiviral immunity by examining the immune response mounted by CD40L-deficient mice following infection with lymphocytic choriomeningitis virus (LCMV), Pichinde virus, or vesicular stomatitis virus. Humoral immune responses of \*\*\*CD40L\*\*\*-deficient mice to these viruses were severely compromised, although moderate titers of antiviral IgM and some IgG2a were produced by virus-infected CD40L-deficient mice by a CD4+ \*\*\*T\*\*\* \*\*cell\*\*\*-independent mechanism. By contrast, CD40L-deficient mice made strong primary CTL responses to all three viruses. Interestingly however, although memory CTL activity was detectable in CD40L-deficient mice two months after infection with LCMV, the memory CTL response was much less efficient than in wild-type mice. Together, the results show that CD40-CD40L

interactions are required for strong antiviral humoral immune responses, and reveal a novel role for CD40L in the establishment and/or maintenance of CD8+ CTL memory.

9/7/10 (Item 1 from file: 73)  
DIALOG(R)File 73:EMBASE  
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0076474603 EMBASE No: 1996152206

Studying immunological tolerance by physically monitoring antigen-specific T cells in vivo  
Khoruts A.; Jenkins M.K.

Department of Microbiology, University of Minnesota Medical School, 420 Delaware Street S.E., Minneapolis, MN 55455, United States

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Annals of the New York Academy of Sciences ( ANN. NEW YORK ACAD. SCI. ) ( United States) May 28, 1996, 778/- (72-79)

CODEN: ANYAA ISSN: 00778923

DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract

LANGUAGE: English SUMMARY LANGUAGE: English

NUMBER OF REFERENCES: 43

Generation of antigen-specific immunity or tolerance are different outcomes of a highly complex interaction between antigen, antigen-specific lymphocytes, and APC. Clearly, full understanding of this process must include the study of antigen-specific lymphocytes in vivo, under conditions known to result in immunity or tolerance. This has now become possible with the advent of methods that allow direct detection of antigen-

\*\*\*specific\*\*\* \*\*\*T\*\*\* \*\*\*cells\*\*\* . One of the most striking observations made thus far is the seemingly critical crosstalk between T and B cells. It is well established that B-cell responses are to a high degree dependent on T-cell help, which consists of CD40/CD40 ligand interaction and delivery of various T cell-derived cytokines. Several lines of evidence now point to equal dependency of T-cell responses on interaction with B cells. T helper-cell priming in lymph nodes has only been observed when these cells migrate into B cell-rich follicles. In addition, T-cell priming does not occur in anti-IgM-treated B cell-depleted mice, and adoptive transfer of B cells back into these animals before immunization results in restoration of T-cell responses. Finally, when antigen presentation is targeted to occur exclusively through B cells, the effect on T cells seems to depend on the activation state of B cells. T-cell immunity results when B cells are activated, whereas tolerance is induced when the B cells are resting. The following model outlines possible events that can lead to tolerance or immunity, with an emphasis on the role of B-cell APC. Tolerance is induced when monomeric soluble antigens are injected without adjuvants. Antigen is taken up by dendritic cells that constitutively express costimulatory molecules (e.g., B7) and are thus able to stimulate IL-2 production and some T-cell proliferation. T-cell proliferation is short lived, and T cells are restricted to the paracortex, where they subsequently encounter resting B cells that present antigen leading to tolerance. In the case of oral tolerance, it is also possible that the GALT is the major source of B cells that carry antigen throughout the peripheral lymphoid tissues. Because antigens picked up in the GALT are predigested in the gut lumen, activation of B cells by cross-linking their surface immunoglobulin receptors may be particularly unlikely. Adjuvants,

however, are able to shift the sequence toward immunity by activating B cells to express costimulatory molecules. Adsorption of antigens to alum may do the same thing by enhancing cross-linking of B cell-surface immunoglobulins. It is also conceivable that signals generated by the antigen and adjuvant may directly act on T cells and promote migration to the follicles, where interaction with activated B cells would be more likely to take place. This would lead to further activation and proliferation of T cells (that subsequently would leave the lymph node and migrate toward the tissues) and stimulation of antibody production by the B cells. This model places great emphasis on the role of adjuvants in the induction of immunity to soluble antigens. How then is immunity ever induced to infectious agents that obviously do not enter the body emulsified in CFA? The answer probably is that molecules with adjuvant properties (such as lipopolysaccharide, peptidoglycan, or double-stranded RNA) are intrinsic components of all microbes that the innate immune system has come to recognize. If this model is correct, then peripheral tolerance is actually the default pathway that the immune system will follow unless the antigen in question is recognized in an inflammatory context. The advantage of this strategy is that any newly expressed self-protein will induce tolerance, and only antigens that are recognized in the context of inflammation will induce immunity.

9/7/11 (Item 1 from file: 155)  
 DIALOG(R)File 155:MEDLINE(R)  
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17436617 PMID: 17406204  
 Live-cell assay to detect antigen-specific CD4+ T  
 - \*\*cell\*\* responses by \*\*\*CD154\*\*\* expression.  
 Chattopadhyay Pratip K; Yu Joanne; Roederer Mario  
 Immunotechnology Section, Vaccine Research Center, National Institute of  
 Allergy and Infectious Diseases, National Institutes of Health, 40 Convent  
 Drive, Bethesda, Maryland 20892, USA. pchattop@mail.nih.gov  
 Nature protocols (England) 2006, 1 (1) p1-6, ISSN 1750-2799--  
 Electronic Journal Code: 101284307

Publishing Model Print  
 Document type: Journal Article  
 Languages: ENGLISH  
 Main Citation Owner: NLM  
 Record type: MEDLINE; Completed

This protocol details a method to identify CD4+ T cells that  
 respond to antigens. The method relies on \*\*\*detection\*\*\* of \*\*\*CD154\*\*\* , a  
 costimulatory cell surface protein that is expressed by CD4+ T  
 cells upon activation, and can be used to purify live CD4+ T  
 \*\*\*cells\*\*\* of diverse function. To \*\*\*detect\*\*\* \*\*\*CD154\*\*\* ,  
 fluorescently  
 labeled antibodies are cultured with cell samples, peptides (or whole  
 antigens) and monensin during a 6- to 24-h stimulation period. (Note that  
 the assay is not compatible with brefeldin A.) After stimulation, cells are  
 stained with any other antibodies of interest and then are analyzed by flow  
 cytometry or purified by cell sorting. Unlike other assays, this method  
 allows simultaneous assessment of other cell phenotypes or functions, is  
 compatible with downstream RNA-based assays and preserves cell viability.  
 This protocol can be completed in 9 h.

Record Date Created: 20070404  
 Record Date Completed: 20070621

9/7/12 (Item 1 from file: 399)  
 DIALOG(R)File 399:CA SEARCH(R)

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143344742 CA: 143(19)344742z JOURNAL  
A live-cell assay to detect antigen-specific CD4+ T cells with diverse cytokine profiles  
AUTHOR(S): Chattopadhyay, Pratip K.; Yu, Joanne; Roederer, Mario  
LOCATION: ImmunoTechnology Section, Vaccine Research Center, National Institute of Allergy and Infectious Disease, National Institutes of Health, Bethesda, MD, 20892, USA  
JOURNAL: Nat. Med. (N. Y., NY, U. S.) (Nature Medicine (New York, NY, United States)) DATE: 2005 VOLUME: 11 NUMBER: 10 PAGES: 1113-1117  
CODEN: NAMEFI ISSN: 1078-8956 LANGUAGE: English PUBLISHER: Nature Publishing Group  
SECTION:  
CA215001 Immunochemistry  
CA209XXX Biochemical Methods  
IDENTIFIERS: live cell immunoassay antigen CD4 T lymphocyte cytokine  
DESCRIPTORS:  
Glycoproteins...  
CD40-L (antigen CD40 ligand); live-cell assay to detect antigen-specific CD4+ T cells with diverse cytokine profiles  
Interferons...  
γ; live-cell assay to detect antigen-specific CD4+ T cells with diverse cytokine profiles  
Immunoassay... Antigens... CD4-positive T cell... Tumor necrosis factors... Interleukin 2... Vaccines... Pathogen... CD40(antigen)...  
Antigen-presenting cell... Interleukin 4... Interleukin 5... Interleukin 10  
...  
live-cell assay to detect antigen-specific CD4+ T cells with diverse cytokine profiles

9/7/13 (Item 2 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

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140286138 CA: 140(18)286138g PATENT  
Method for detecting and isolating antigen specific T lymphocytes  
INVENTOR(AUTHOR): Frentsch, Marco; Rothe, Martin; Thiel, Andreas  
LOCATION: Germany,  
ASSIGNEE: Deutsches Rheuma-Forschungs Zentrum Berlin  
PATENT: PCT International; WO 200427428 A1 DATE: 20040401  
APPLICATION: WO 2003EP9354 (20030822) \*EP 200290300 (20020823)  
PAGES: 42 pp. CODEN: PIXXD2 LANGUAGE: German  
PATENT CLASSIFICATIONS:  
CLASS: G01N-033/569A  
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ DESIGNATED REGIONAL: GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GN; GQ; GW; ML; MR; NE; SN; TD; TG  
SECTION:  
CA215001 Immunochemistry  
IDENTIFIERS: T cell isolation CD154 immunotherapy infection allergy  
cytokine autoimmunity  
DESCRIPTORS:  
Spinal column,disease...

ankylosing spondylitis; method for detecting and isolating antigen specific T lymphocyte and their uses  
 Immunity...  
   autoimmunity; method for detecting and isolating antigen specific T lymphocyte and their uses  
 Transforming growth factors...  
    $\beta$ -; method for detecting and isolating antigen specific T lymphocyte and their uses  
 Glycoproteins...  
   CD40-L (antigen CD40 ligand); method for detecting and isolating antigen specific T lymphocyte and their uses  
 Intestine,disease...  
   Crohn's; method for detecting and isolating antigen specific T lymphocyte and their uses  
 Interferons...  
    $\gamma$ ; method for detecting and isolating antigen specific T lymphocyte and their uses  
 Transplant and Transplantation...  
   graft-vs.-host reaction; method for detecting and isolating antigen specific T lymphocyte and their uses  
 T cell(lymphocyte)... CD40(antigen)... Human... CD4-positive T cell... CD8-positive T cell... Immunotherapy... Infection... Allergy...  
 Inflammation... Tumor necrosis factors... Interleukin 2... Interleukin 4...  
 Allergens... CD69(antigen)... Interleukin 5... Interleukin 10...  
 Interleukin 13... Rheumatoid arthritis... Multiple sclerosis... Arthritis  
 ... Diabetes mellitus... Disease models...  
   method for detecting and isolating antigen specific T lymphocyte and their uses  
 Connective tissue,disease...  
   scleroderma; method for detecting and isolating antigen specific T lymphocyte and their uses  
 Lupus erythematosus...  
   systemic; method for detecting and isolating antigen specific T lymphocyte and their uses  
 Toxoids...  
   tetanus; method for detecting and isolating antigen specific T lymphocyte and their uses  
 Antigens...  
   tumor-associated; method for detecting and isolating antigen specific T lymphocyte and their uses  
 Eye,disease...  
   uveitis; method for detecting and isolating antigen specific T lymphocyte and their uses  
 Blood vessel,disease...  
   vasculitis; method for detecting and isolating antigen specific T lymphocyte and their uses

9/7/14 (Item 3 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

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130251215 CA: 130(19)251215w PATENT  
 Catalytic antibodies and a method of producing same  
 INVENTOR(AUTHOR): Koentgen, Frank; Suess, Gabriele Maria; Tarlinton, David Mathew; Treutlein, Herbert Rudolf  
 LOCATION: Australia  
 ASSIGNEE: Amrad Operations Pty. Ltd.  
 PATENT: PCT International ; WO 9915563 A1 DATE: 19990401  
 APPLICATION: WO 98AU783 (19980918) \*AU 979306 (19970919)  
 PAGES: 101 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: C07K-016/00A; C12N-015/19B

DESIGNATED COUNTRIES: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; GM; HR; HU; ID; IL; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; US; UZ; VN; YU; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONS: GH; GM; KE; LS; MW; SD; SZ; UG; ZW; AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML; MR; NE; SN; TD; TG

SECTION:

CA215002 Immunochemistry  
CA203XXX Biochemical Genetics  
CA207XXX Enzymes

IDENTIFIERS: catalytic antibody multimeric growth factor precursor,  
antigen specific B T cell activation, protein L Peptostreptococcus  
magnus catalytic antibody

DESCRIPTORS:

Proteins(specific proteins and subclasses)...  
cell surface-assocd.; prepn. of recombinant growth factor precursor  
comprising B or T cell surface mol., antigen cleavable by a catalytic  
antibody and Ig light or heavy chain domains for diagnosis/tre  
Epitopes...  
FLAG; prepn. of recombinant growth factor precursor comprising B or T  
cell surface mol., antigen cleavable by a catalytic antibody and Ig  
light or heavy chain domains for diagnosis/treatment and indus  
Porins...  
gene ompA; prepn. of recombinant growth factor precursor comprising B  
or T cell surface mol., antigen cleavable by a catalytic antibody and  
Ig light or heavy chain domains for diagnosis/treatment and  
Proteins(specific proteins and subclasses)...  
L; prepn. of recombinant growth factor precursor comprising B or T cell  
surface mol., antigen cleavable by a catalytic antibody and Ig light or  
heavy chain domains for diagnosis/treatment and industri  
Proteins(specific proteins and subclasses)...  
LEN; prepn. of recombinant growth factor precursor comprising B or T  
cell surface mol., antigen cleavable by a catalytic antibody and Ig  
light or heavy chain domains for diagnosis/treatment and indust  
Growth factors(animal)...  
precursor; prepn. of recombinant growth factor precursor comprising B  
or T cell surface mol., antigen cleavable by a catalytic antibody and  
Ig light or heavy chain domains for diagnosis/treatment and  
Adjuvants(immunological)... Affinity chromatography... AIDS(disease)...  
Alzheimer's disease... Antigens... B cell activation... B cell  
proliferation... B cell(lymphocyte)... Catalysts... Catalytic antibodies...  
CD40 ligand... CD80(antigen)... CD86(antigen)... Class II MHC antigens...  
CTLA-4(antigen)... DNA sequences... Genes(animal)... IgG... IgM...  
Immunoglobulin heavy chains... Immunoglobulin light chains... Interleukin 2  
... Mitogens... Nucleic acids... Peptostreptococcus magnus... Protein  
sequences... Rheumatoid arthritis... Signal peptides... T cell(lymphocyte)  
... Tobacco etch virus... Vaccines...  
prepn. of recombinant growth factor precursor comprising B or T cell  
surface mol., antigen cleavable by a catalytic antibody and Ig light or  
heavy chain domains for diagnosis/treatment and industrial  
Multiple myeloma...  
protein LEN; prepn. of recombinant growth factor precursor comprising B  
or T cell surface mol., antigen cleavable by a catalytic antibody and  
Ig light or heavy chain domains for diagnosis/treatment an  
CAS REGISTRY NUMBERS:  
197923-69-6 197923-71-0 197923-73-2 197923-75-4 221650-12-0  
221650-14-2 221650-16-4 amino acid sequence; prepn. of recombinant

growth factor precursor comprising B or T cell surface mol., antigen cleavable by a catalytic antibody and Ig light or heavy chain domains for diagnosis/treatment and industrial purposes

197923-68-5 197923-70-9 197923-72-1 197923-74-3 221650-13-1 221650-15-3 221650-17-5 nucleotide sequence; prepn. of recombinant growth factor precursor comprising B or T cell surface mol., antigen cleavable by a catalytic antibody and Ig light or heavy chain domains for diagnosis/treatment and industrial purposes

80295-45-0P 98849-88-8P 147395-23-1P prepn. of recombinant growth factor precursor comprising B or T cell surface mol., antigen cleavable by a catalytic antibody and Ig light or heavy chain domains for diagnosis/treatment and industrial purposes

9001-92-7P tobacco etch virus; prepn. of recombinant growth factor precursor comprising B or T cell surface mol., antigen cleavable by a catalytic antibody and Ig light or heavy chain domains for diagnosis/treatment and industrial purposes

? ds

Set	Items	Description
S1	17	E1-E4
S2	4	AU='ROTHE MARTIN'
S3	100	AU='THIEL ANDREAS'
S4	58	(S1 OR S2 OR S3) AND (T(W)CELL? OR T(W)LYMPHOCYT?)
S5	39	RD S4 (unique items)
S6	23	(T(W)CELL? OR T(W)LYMPHOCYT?) (20N) (DETECT? OR DIAGNOS?) (20-N) (CD154 OR CD40L OR CD40(W)LIGAND) (20N) (ANTIGEN(W)SPECIFIC?)
S7	11	RD S6 (unique items)
S8	26	(T(W)CELL? OR T(W)LYMPHOCYT?) (20N) (DETECT? OR DIAGNOS?) (20-N) (CD154 OR CD40L OR CD40(W)LIGAND) AND (ANTIGEN(W)SPECIFIC?) (20N) (T(W)CELL? OR T(W)LYMPHOCYT?)
S9	14	RD S8 (unique items)